ORDER NO. HAD83122678C8

Service Manual

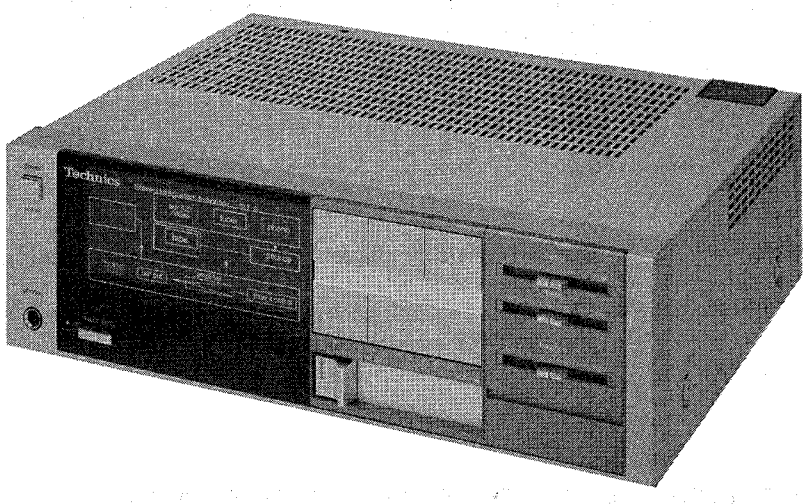
Stereo Integrated Amplifier

SU-6

[EX],[EK],[EW],[EF],[EB]
[EH],[Ei],[XA],[XL],[EGA]

SU-6(K)

[EX],[EW],[EK]
[EH],[XA],[EGA]



* The colors of this model include silver and black.
* The black type model is provided with (K) in the Service Manual.

Areas

* [EX] is available in Scandinavia.
* [EK] is available in United Kingdom.
* [EW] is available in Switzerland.
* [EF] is available in France.
* [EB] is available in Belgium.
* [EH] is available in Holland.
* [Ei] is available in Italy.
* [XA] is avialable in Southeast Asia, Oceania, Africa, Middle Near East and Central South America.
* [XL] is available in Australia.
* [EGA] is available in F.R. Germany.

Specifications (Specifications are subject to change without notice for further improvement.)

(DIN 45 500)

■ AMPLIFIER SECTION

40 Hz~20 kHz continuous power output	
both channels driven	2 × 35W (8Ω)
1 kHz continuous power output	
both channels driven	2 × 40W (8Ω)
Total harmonic distortion	
rated power at 40 Hz~20 kHz	0.05% (8Ω)
rated power at 1 kHz	0.8% (8Ω)
half power at 20 Hz~20 kHz	0.03% (8Ω)
half power at 1 kHz	0.005% (8Ω)
Intermodulation distortion	
rated power at 60 Hz: 7 kHz=4:1, SMPTE, 8Ω	0.03%
Power bandwidth	
both channels driven, −3 dB	10 Hz~25 kHz (8Ω)
Residual hum and noise	0.8 mV
Damping factor	40 (8Ω)
Input sensitivity and impedance	
PHONO	2.5 mV/47kΩ
TUNER, AUX/CD/VIDEO	150 mV/27kΩ
TAPE	150 mV/27kΩ
PHONO maximum input voltage (1 kHz, RMS)	150 mV
S/N	
rated power (8Ω)	
PHONO	73 dB (IHF, A: 72 dB)
TUNER, AUX/CD/VIDEO, TAPE	89 dB (IHF, A: 98 dB)
Frequency response	
PHONO	RIAA standard curve ±0.8 dB (30 Hz~15 kHz)
TUNER, AUX/CD/VIDEO, TAPE	10 Hz~80 kHz (−3 dB)
Tone controls	
BASS	50 Hz, +10 dB~ −10 dB
TREBLE	20 kHz, +10 dB~ −10 dB
Output voltage and impedance	
REC OUT	150 mV
Channel balance, AUX/CD/VIDEO 250 Hz~6,300 Hz	±1 dB
Channel separation, AUX/CD/VIDEO 1 kHz	55 dB
Headphones output level and impedance	420 mV/330Ω
Load impedance	8Ω~16Ω

■ GENERAL

Power consumption	200W
Power supply	
For United Kingdom and Australia	AC 50Hz/60 Hz, 240V
For continental Europe	AC 50 Hz/60 Hz, 220V
For other areas	AC 50 Hz/60 Hz, 110V/120V/220V/240V
Dimensions (W×H×D)	315 × 99 × 245 mm (12-13/32" × 3-29/32" × 9-21/32")
Weight	4.7 kg (10.4 lb.)

Note:
Total harmonic distortion is measured by the digital spectrum analyzer (H.P. 3045 system).

Technics

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

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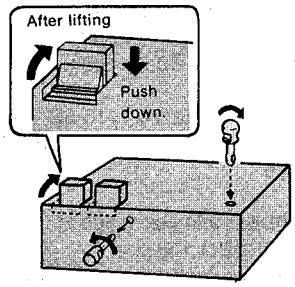
FEATURE

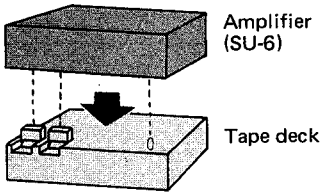
- "Super bass" circuit capable of reproducing grave low sound with compact speakers.
- Direct operation allowing you to select the desired source by one touch.
- Direct connection system that makes the connection when set up.
- Signal processing display that indicates the condition of program source.
- Electronic protection circuit that protects the speakers and amplifier from breakdown.

STANDARD CONNECTION METHOD WITH DIRECT CONNECTOR

① Lift the direct connector on the tape deck. Push it straight down to lock it into place.
② Remove the stabilizing pin from the back panel. (Turn counterclockwise 90° and pull.)
③ Insert the pin into the top panel. (Push in and turn clockwise 90°.)

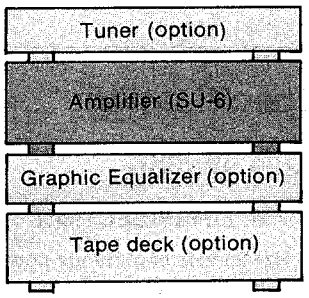


④ Lower the amplifier onto the tape deck. Line up the direct connector and stabilizing pin properly.



⑤ Connect the tuner to the amplifier the same way as in ① ~ ④.
⑥ Connect the turntable and speakers with their respective cords.

Notes:
1. When using the direct connectors, do not use pin cords.
2. When using the graphic equalizer, place it between the amplifier and the tape deck.

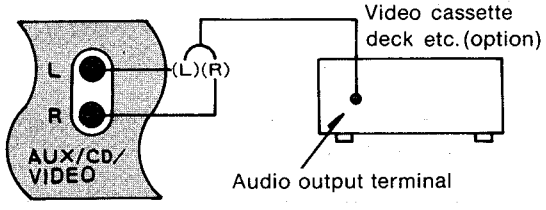


3. Position the units in a straight column to avoid twisting and breaking the direct connectors.
4. If this unit is installed in a rack, first make the direct connector connections.

• "AUX/CD/VIDEO" terminals

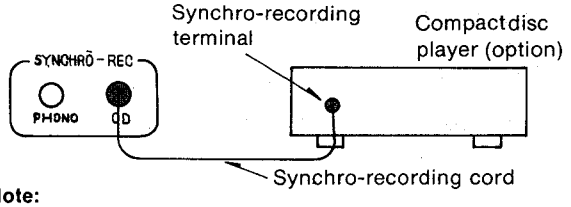
Use these terminals to connect a tape deck (playback only), compact disc (digital audio disc) player, or audio output of a video unit.

If the video unit has only one audio output terminal, use a Y-type cord (monaural to stereo) to make the connection.



• Synchro-recording terminal

In addition to the turntable, the Technics compact disc player (model SL-P7) can be connected by using the synchro-recording connection cord (option).



Note:
If the model SL-3 or SL-6 turntable is used, an extension cord (option) is needed.

ORDER NO. HAD83122678C8–A

DEUTSCH

Stereo Integrated Amplifier

SU-6/SU-6(K)

- This booklet contains the specifications for SU-6, written German, French and Spanish, and the circuits to be changed according to areas.
- File this manual together with the SU-6 service manual (Order No. HAD83122678C8).
- Diese Broschüre enthält die technischen Daten für SU-6 in deutscher, französischer und spanisher Sprache, sowie die entsprechend dem Gebiet zu änderenden Schaltungen.
- Bewahren Sie das Büchlein zusammen mit der Bedienungsanleitung für SU-6 (Bestell-Nr. HAD83122678C8) auf.
- Cette brochure contient les spécifications pour le SU-6, écrites en allemand, en français et en espagnol, et explique les circuits devant être modifiés selon les regions.
- Classer ce manuel en même temps qu'avec le manuel de service du SU-6 (N° d'ordre: HAD83122678C8).
- Este librito contiene las especificaciones para SU-6, escritas en alemán, francés y español, y los circuits a cambiarse según las áreas.
- Guardar este manual juntamente con el manual de servicio de SU-6 (Pedido N°. HAD83122678C8).

DEUTSCH

■ TECHNISCHE DATEN (Spezifikationen Können infolge von Verbesserungen ohne Ankündigung geändert werden.)

(DIN 45 500)

■ VERSTÄRKERTEIL

Dauerton-Ausgangsleistung bei 40 Hz ~ 20 kHz	
beide Kanäle ausgesteuert	2 × 35W (8 Ω)
Dauerton-Ausgangsleistung bei 1 kHz	
beide Kanäle ausgesteuert	2 × 40W (8 Ω)
Gesamtklirrfaktor	
Nennleistung bei 40 Hz ~ 20 kHz	0,05% (8 Ω)
Nennleistung bei 1 kHz	0,8% (8 Ω)
halbe Nennleistung bei 20 Hz ~ 20 kHz	0,03% (8 Ω)
halbe Nennleistung bei 1 kHz	0,005% (8 Ω)
Intermodulationsfaktor	
Nennleistung bei 60 Hz: 7 kHz = 4:1, nach SMPTE, 8 Ω	0,03%
Leistungsbandbreite	
beide Kanäle ausgesteuert bei −3 dB	10 Hz ~ 25 kHz (8 Ω)
Restbrumm und Geräusch	0,8 mV
Dämpfungsfaktor	40 (8 Ω)
Eingangsempfindlichkeit und -impedanz	
PHONO	2,5 mV/47 kΩ
TUNER, AUX/CD/VIDEO	150 mV/27 kΩ
TAPE	150 mV/27 kΩ
Maximale TA-Eingangsspannung (1 kHz, eff.)	150 mV
Geräuschabstand	
Nennleistung (8 Ω)	
PHONO	73 dB (nach IHF, A: 72 dB)
TUNER, AUX/CD/VIDEO, TAPE	89 dB (nach IHF, A: 98 dB)
Frequenzgang	
PHONO	RIAA-Standardkurve ±0,8 dB (30 Hz ~ 15 kHz)
TUNER, AUX/CD/VIDEO, TAPE	10 Hz ~ 80 kHz (−3 dB)
Klangregler	
Baßregler (BASS)	50 Hz, +10 dB ~ −10 dB
Höhenregler (TREBLE)	20 kHz, +10 dB ~ −10 dB
Ausgangsspannung und -impedanz	
Aufnahmeausgang (REC OUT)	150 mV
Kanalabweichung (AUX/CD/VIDEO 250 Hz ~ 6300 Hz)	±1 dB
Übersprechdämpfung (AUX/CD/VIDEO, 1 kHz)	55 dB
Kopfhörerpegel und -impedanz	420 mV/330 Ω
Lautsprecherimpedanz	8 Ω ~ 16 Ω

■ ALLGEMEINE DATEN

Leistungsaufnahme	200 W
Netzspannung	
Für Kontinentaleuropa	Wechselstrom 50 Hz/60 Hz, 220V
Für andere Länder	Wechselstrom 50 Hz/60 Hz, 110V/120V/220V/240V
Abmessungen (B×H×T)	315 × 99 × 245 mm
Gewicht	4,7 kg

Bemerkung:
Der Gesamtklirrfaktor wurde mit einem digitalen Rauschspektrometer (Anlage H.P. 3045) gemessen.

FRANCAIS

■ CARACTERISTIQUES (Sujet à changement sans prearis.)

(DIN 45 500)

■ SECTION AMPLIFICATEUR

Puissance de sortie continue de 40 Hz~20 kHz, les deux canaux en circuit	2 × 35W (8Ω)
Puissance de sortie continue à 1 kHz les deux canaux en circuit	2 × 40W (8Ω)
Distorsion harmonique totale	
à puissance nominale (40 Hz~20 kHz)	0,05% (8Ω)
à puissance nominale (1 kHz)	0,8% (8Ω)
à demi-puissance (20 Hz~20 kHz)	0,03% (8Ω)
à demi-puissance (1 kHz)	0,005% (8Ω)
Distorsion d'intermodulation à puissance nominale à 60 Hz: 7 kHz=4:1, SMPTE, 8Ω	0,03%
Réponse de fréquences les deux canaux en circuit, −3 dB	10 Hz~25 kHz (8Ω)
Bruit et ronflement résiduels	0,8 mV
Coefficient d'amortissement	40 (8Ω)
Sensibilité et impédance d'entrée	
PHONO	2,5 mV/47kΩ
SYNTONISATEUR, AUX/CD/VIDEO (TUNER, AUX/CD/VIDEO)	150 mV/27kΩ
BANDE (TAPE)	150 mV/27kΩ
PHONO (tension d'entrée maximum, 1 kHz RMS)	150 mV
Signal/Bruit à puissance nominale (8Ω)	
PHONO	73 dB (IHF, A: 72 dB)
SYNTONISATEUR, AUX/CD/VIDEO, BANDE (TUNER, AUX/CD/VIDEO, TAPE)	89 dB (IHF, A: 98 dB)
Réponse de fréquence	
PHONO	Courbe nominale RIAA ±0,8 dB (30 Hz~15 kHz)
SYNTONISATEUR, AUX/CD/VIDEO, BANDE (TUNER, AUX/CD/VIDEO, TAPE)	10 Hz~80 kHz (−3 dB)
Réglage de la tonalité	
BASSES (BASS)	50 Hz, +10 dB~ −10 dB
AIGUS (TREBLE)	20 kHz, +10 dB~ −10 dB
Tension de sortie et impédance	
Sortie enregistrement (REC OUT)	150 mV
Equilibrage des canaux, AUX/CD/VIDEO 250 Hz~6 300 Hz	±1 dB
Séparation des canaux, AUX/CD/VIDEO 1 kHz	55 dB
Niveau de sortie des casques et impédance	420 mV/330Ω
Impédance de charge	8Ω~16Ω

■ DIVERS

Consommation	200W
Alimentation	
Pour l'Europe	CA 50 Hz/60 Hz, 220V
Autres	CA 50 Hz/60 Hz, 110V/120V/220V/240V
Dimensions (L×H×Pr)	315 × 99 × 245 mm
Poids	4,7 kg

Remarque:
On mesure la distorsion harmonique totale au moyen d'un analyseur de spectre digital (Système H.P. 3045).

ESPAÑOL

■ ESPECIFICACIONES (Estas especificaciones están sujetas a cualquier cambio sin previo eviso.)

(DIN 45 500)

■ SECCION AMPLIFICADOR

Potencia continua de 40 Hz~20 kHz en ambos canales	2 × 35W (8Ω)
Potencia continua de 1 kHz en ambos canales	2 × 40W (8Ω)
Distorsión armónica total	
potencia de régimen a 40 Hz~20 kHz	0,05% (8Ω)
potencia de régimen a 1 kHz	0,8% (8Ω)
mitad de potencia a 20 Hz~20 kHz	0,03% (8Ω)
mitad de potencia a 1 kHz	0,005% (8Ω)
Distorsión por intermodulación potencia de régimen a 60 Hz: 7 kHz=4:1, SMPTE, 8Ω	0,03%
Ancho de banda de potencia con ambos canales, −3 dB	10 Hz~25 kHz (8Ω)
Zumbido residual y ruido	0,8 mV
Factor de amortiguamiento	40 (8Ω)
Sensibilidad e impedancia de entrada	
TOCADISC. (PHONO)	2,5 mV/47kΩ
SINTON., AUX/CD/VIDEO (TUNER, AUX/CD/VIDEO)	150 mV/27kΩ
GRAB. (TAPE)	150 mV/27kΩ
Voltaje máximo de entrada de PHONO (1 kHz, RMS)	150 mV
Relación de señal a ruido potencia de régimen (8Ω)	
TOCADISC. (PHONO)	73 dB (IHF, A: 72 dB)
SINTON., AUX/CD/VIDEO, GRAB. (TUNER, AUX/CD/VIDEO, TAPE)	89 dB (IHF, A: 98 dB)

Respuesta de frecuencia
TOCADISC. (PHONO) curva RIAA estándar ±0,8 dB (30 Hz~15 kHz)
SINTON., AUX/CD/VIDEO, GRAB. (TUNER, AUX/CD/VIDEO, TAPE) 10 Hz~80 kHz (–3 dB)
Controles de tono
BAJOS (BASS) 50 Hz, +10 dB~ –10 dB
AGUDOS (TREBLE) 20 kHz, +10 dB~ –10 dB
Voltaje e impedancia de salida
SAL. GRAB. (REC OUT) 150 mV
Equilibrio de canales, AUX/CD/VIDEO 250 Hz~6 300 Hz ±1 dB
Separación de canales, AUX/CD/VIDEO 1 kHz 55 dB

Impedancia y nivel de salida de los auriculares 420 mV/330Ω
Impedancia de carga 8Ω~16Ω

■ GENERAL

Consumo de energía 200W
Alimentación de energía
Para Europa continental CA 50 Hz/60 Hz, 220V
Para otros paises CA 50 Hz/60 Hz, 110V/120V/220V/240V
Dimensiones (An.×Al.×Prof.) 315 × 99 × 245 mm
Peso 4,7 kg

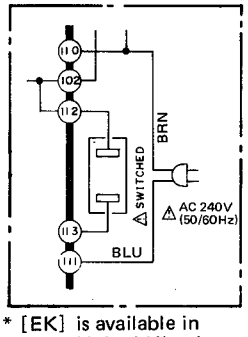
Nota:
La distorsión armónica total se mide con el analizador de espectro digital (sistema H.P. 3045).

■ CIRCUITS TO BE CHANGED AND THE AREAS

■ CIRCUITS TO BE CHANGED AND THE AREAS

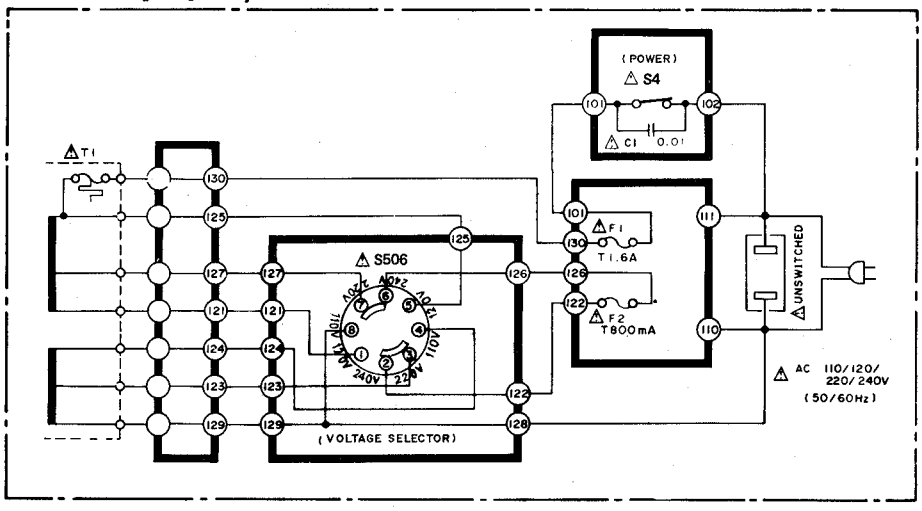
- Power source circuit

Product for [EK] only



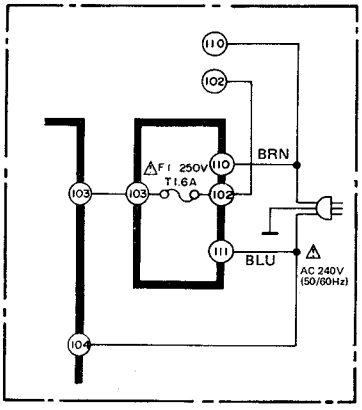
* [EK] is available in United Kingdom.

Product for [XA] only



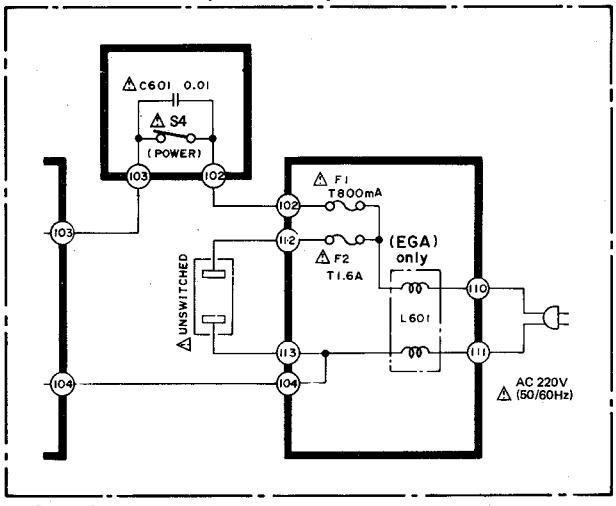
* [XA] is available in Southeast Asia, Oceania, Africa, Middle Near East and Central South America.

Product for [XL] only



* [XL] is available in Australia.

Product for [EGA], [EW] only



* [EGA] is available in F.R. Germany.
* [EW] is available in Switzerland.

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831206600 Ⓚ SH

ORDER NO. HAD84042755S9

Service Manual

Supplement

Stereo Integrated Amplifier

SU-6

[EX],[EW],[EF],[EB],[EH]
[Ei],[XA],[XL],[EGA],[PC]

SU-6(K)

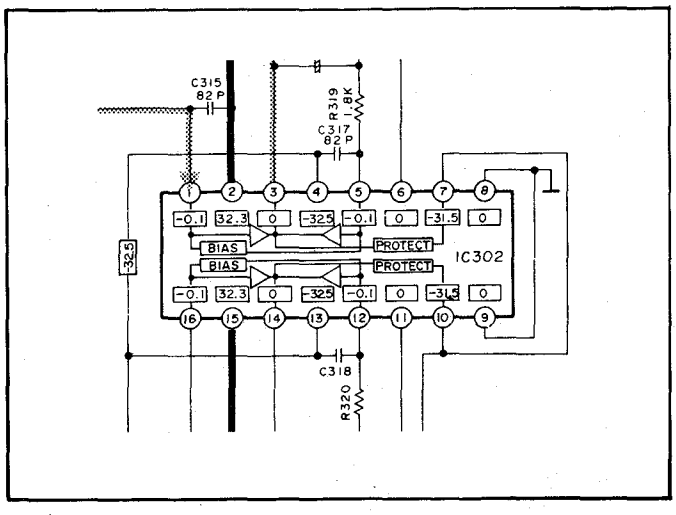
[EX],[EW],[EH],[XA],[EGA]

Please use this manual together with the service manual for Model No. SU-6/(K), Order No. HAD83122678C8.

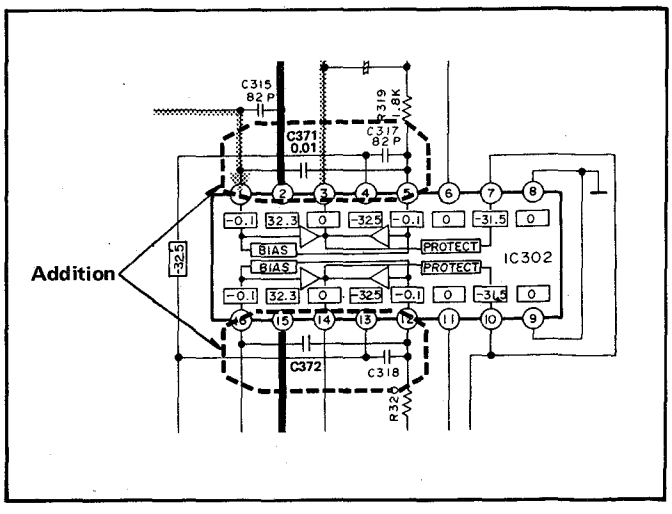
- **POWER AMP. IC (IC302)**

1. There are sets using part No. SVI1001 as power amp. IC (IC302)
2. Two capacitors C371 and C372 are edded to the circuit of a set using part No. SVI1001.
   When repairing or replacing power IC, use part No. SVISTK2028B mentioned in the replacement parts list.
   (Note) Do not remove the capacitor.

Circuit of a set using SVISTK2028B.



Circuit of a set using SVI1001.



* The part No. for C371 and C372 is ECKD1H103.

Technics

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Service Manual

Supplement

Stereo Integrated Amplifier

SU-6

[EX],[EW],[EF],[EB],[EH]
[Ei],[XA],[XL],[EGA],[PC]

SU-6(K)

[EX],[EW],[EH],[XA],[EGA]

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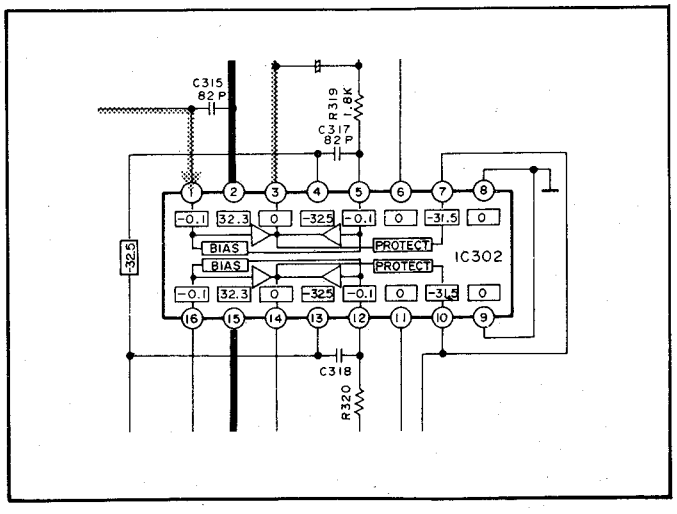
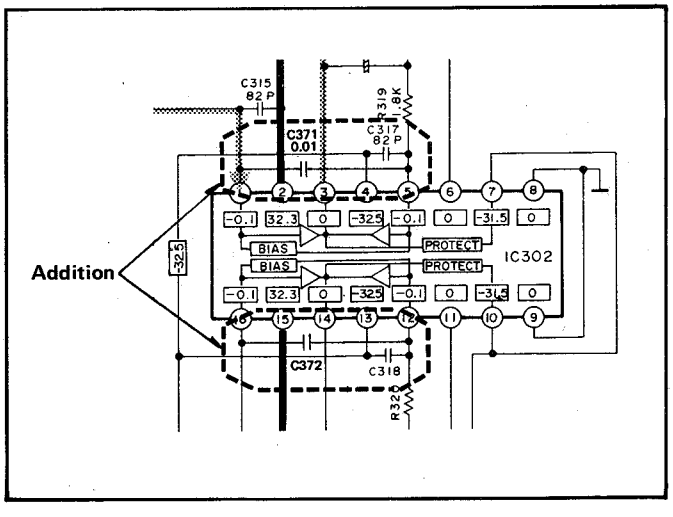
   (Note) Do not remove the capacitor.

Circuit of a set using SVISTK2028B.



Circuit of a set using SVI1001.



* The part No. for C371 and C372 is ECKD1H103.

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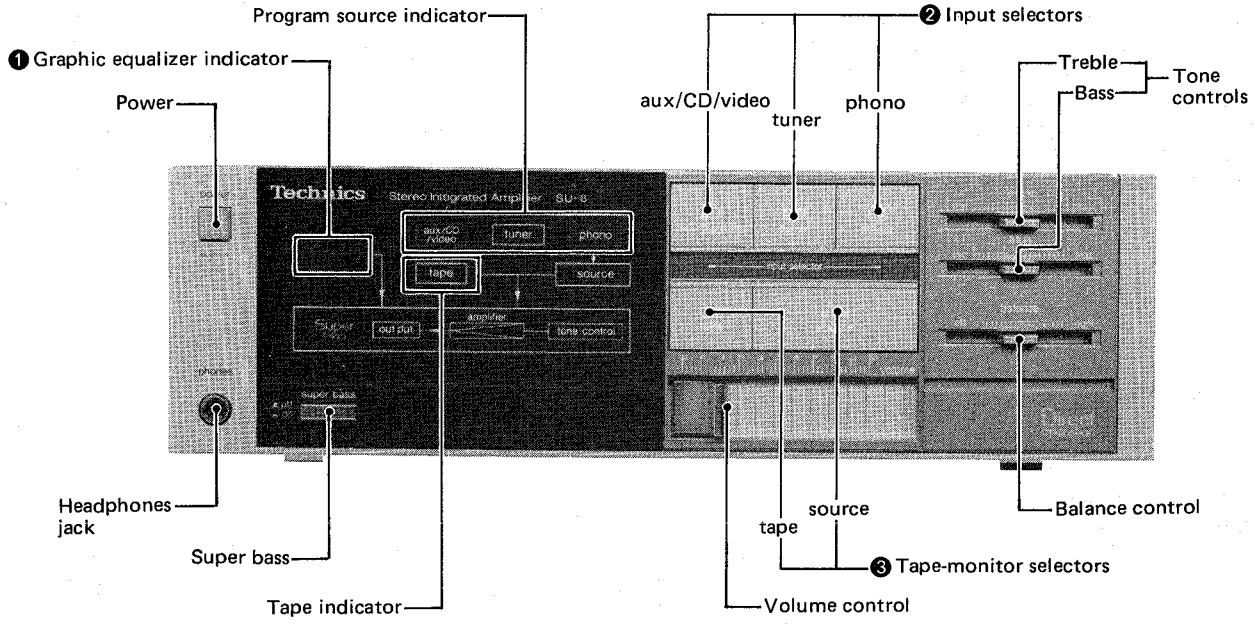
830306600 ⓀS

■ LOCATION OF CONTROLS



❶ Graphic equalizer indicator (graphic EQ)

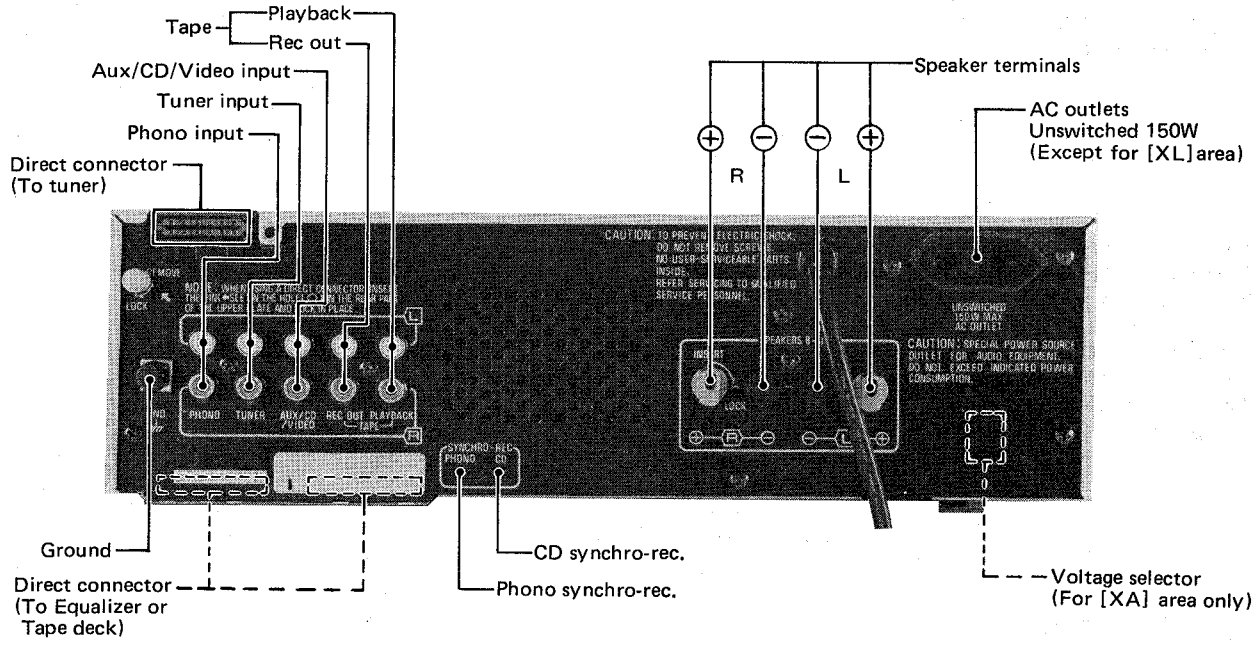
This indicator will illuminate when the Technics graphic equalizer (SH-E4) is connected by the direct connector and the power of the equalizer is switched on.

❷ Input selectors (input selector)

aux/CD/video:
Press this button to listen to equipment connected to the auxiliary input terminals ("AUX/CD/VIDEO").
tuner:
Press this button to listen to radio broadcasts.
phono:
Press this button to listen to phono discs.

❸ Tape-monitor selectors (tape)

source:
Press this button to listen to a phono disc or radio broadcast, or to listen to equipment connected to the auxiliaryinput terminals ("AUX/CD/VIDEO").
tape:
Press this button to play back or monitor the sound from a tape deck, or to use a graphic equalizer, etc. connected to the TAPE terminals.

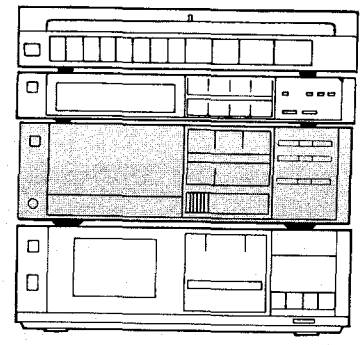


- The power supply for this unit varies depending upon the areas. Also, the parts used for power supply are different. So, refer to the circuit diagram (Separate service manual : Order No. HAD83122678C8–A) and the replacement parts list.

* [XA] area is provided with voltage selector.
* 240V (50/60Hz) for Australia and United Kingdom.
* 220V (50/60Hz) for Continental Europe.
* 110V/120V/220V/240V (50/60Hz) for other [XA] areas.
* Phono input capacitance is about 150pF.

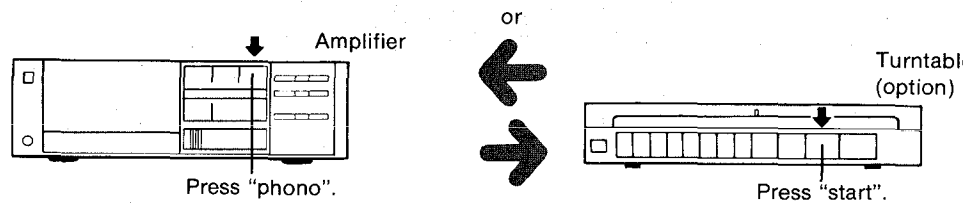
■ DIRECT OPERATION

"Direct operation" means that, once each component has been prepared for operation, any operation can be conveniently selected and started by one-touch operation.
This function is possible only by the combination of Technics components shown in the figure at the right, and which have been connected by direct connectors.
Operation at the amplifier, or at the individual components, is possible.



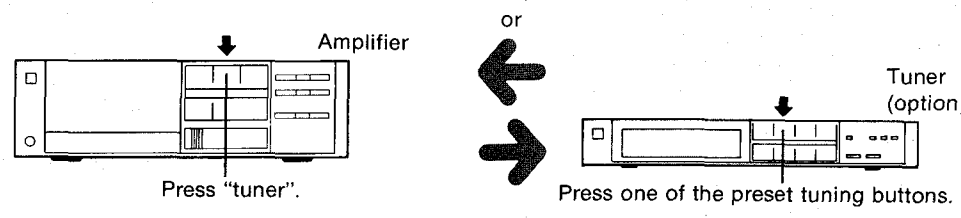
- **To listen to discs...**

Press the "phono" button on the amplifier or the "start" button on the turntable.



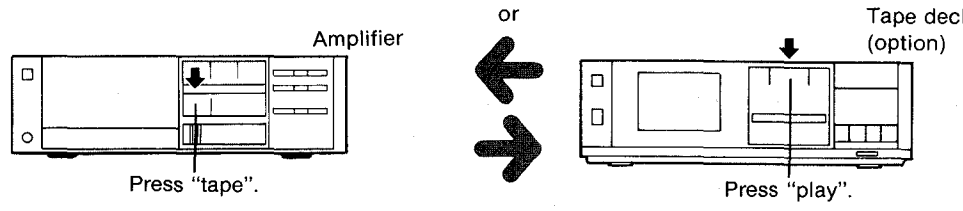
- **To listen to radio broadcasts...**

Press the "tuner" button on the amplifier or one of the preset tuning buttons on the tuner.



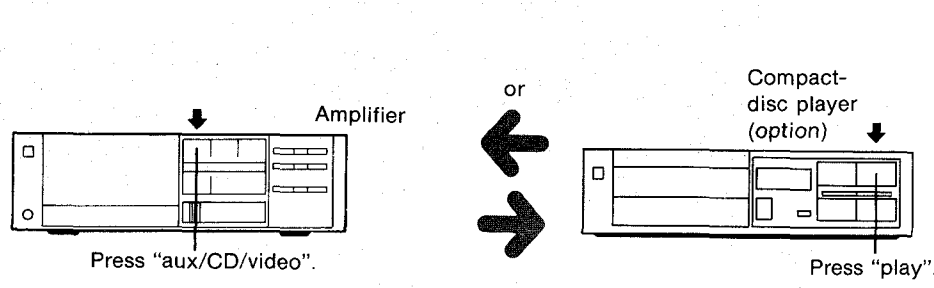
- **To listen to a tape...**

Press the "tape" button on the amplifier or the "play" button on the tape deck.



- **To listen to a compact-disc player...**
  (To listen to the component connected to the AUX/CD/ VIDEO terminal on the rear panel)

Press the "aux/CD/video" button on the amplifier or the "play" button on the compact-disc player.

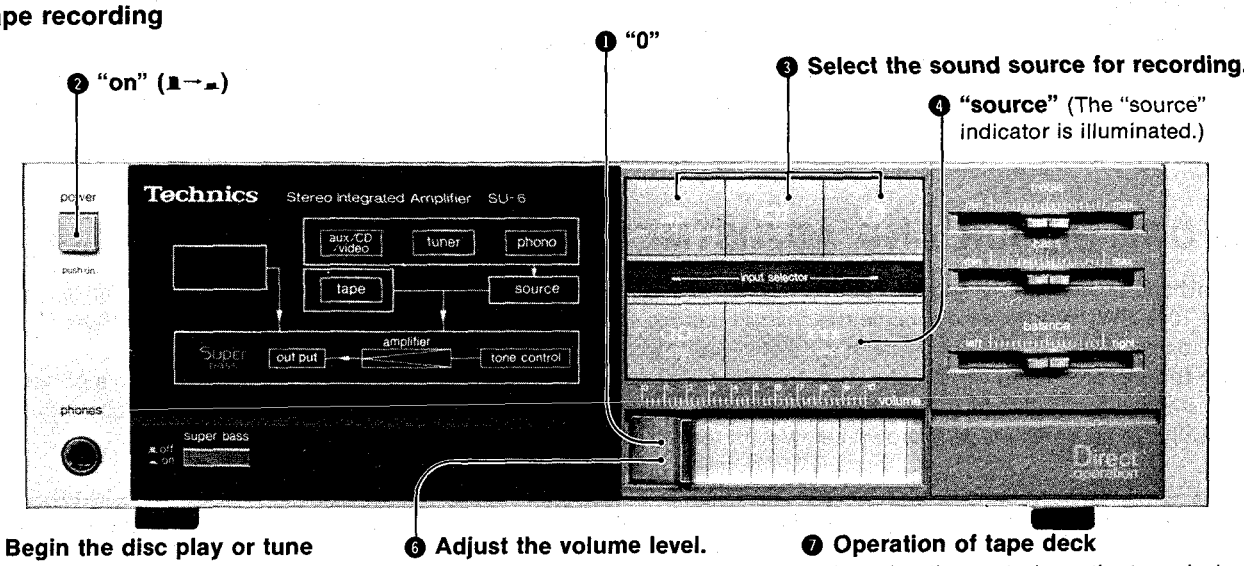


Notes:
1. Do not switch the tuner on while playing a disc or tape, or while tape recording, because to do so will cause the "tuner" input selector to be automatically activated.
2. If, while listening to a disc or radio broadcast, the tape deck is switched off and the tape indicator is illuminated, press the tape-monitor selector marked "source".
3. Even though another input selector is pressed whle listening to a turntable or a compact-disc player, the turntable or compact-disc player will continue to operate; be sure to stop it.

■ TAPE RECORDING AND TAPE-TO TAPE RECORDING

The level of the disc or radio broadcast signal emitted from the recording output terminals ("REC OUT") on the rear panel is always at a constant level, unaffected by the settings of other controls and switches.

■ Tape recording



❺ **Begin the disc play or tune to the radio broadcast.**

❻ **Adjust the volume level.**

❼ **Operation of tape deck**
By using the controls on the tape deck, adjust the recording level. Then begin recording.

■ Tape-to-tape recording

By using two tape decks, tape-to-tape recordings can be made.

1. **Connection**
Connect a playback tape deck to the "AUX/CD/VIDEO" terminal on the rear panel of this unit.

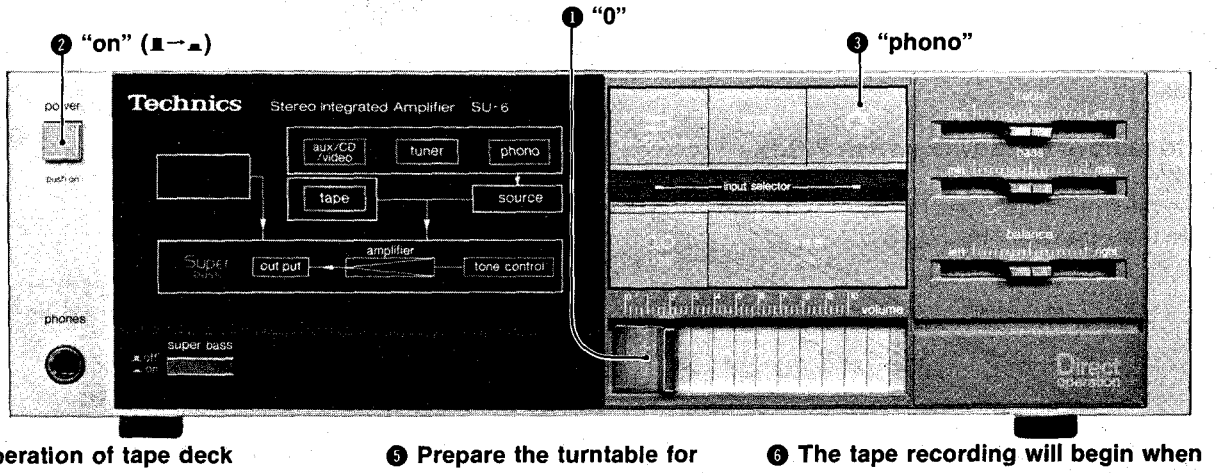
2. **Operation**
According to step ③ above, select "aux/CD/video", and playback, using a playback tape deck according to step ⑤.

■ SYNCHRO-RECORDING

"Synchro-recording" is a convenient feature which can be used to automatically begin tape recording at the moment when a turntable or compact-disc player performance begins. Before beginning the recording, be sure to adjust the recording level. Note that synchro-recording is only possible when using a Technics turntable or compact disc player which has the synchro-recording terminals.

■ Synchro-recording from a turntable

When a turntable from which synchro-recordings are possible is connected, the tape recording will begin at the moment when the stylus descends to the disc surface, and will stop when the stylus is lifted from the disc surface.



❹ **Operation of tape deck**
By using the controls on the tape deck, adjust the recording level.

❺ **Prepare the turntable for disc play.**

❻ **The tape recording will begin when the "start" button on the turntable is pressed.**

■ Synchro-recording from a compact-disc player

When a compact-disc player from which synchro-recordings are possible is connected, the tape recording will begin at the moment the compact disc begins to rotate, and will stop when the disc stops.

In step ③ above, press the "aux/CD/video" button; in step ⑤, prepare the compact-disc player for disc play; and in step ⑥, press the "play" button of the compact-disc player.

■ PROTECTION CIRCUITRY

The protection circuitry may have operated if either of the following conditions is noticed:

- No sound is heard when the power is turned on.
- Sound stops during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are "shorted", or if speaker systems with an impedance less than the indicated rated impedance of this unit are used.

If this occurs, follow the procedure outlines below:

1. Turn off the power.
2. Determine the cause of the problem and correct it.
3. Turn on the power once again after one minute.

Note

When the protection circuitry functions, the unit will not operate unless the power is first turned off and then on again.

■ BEFORE REPAIR AND ADJUSTMENT

1. Turn off the power supply and short-circuit of power supply capacitors (C406 and C407, 6800μF) at resistance (about 10Ω, 5W) in order to discharge the charged voltage. Do not short between C406 and C407 by screwdriver. It may damage the component.
2. Before turning on the power supply after completion of repair, slowly apply the primary voltage by using a power supply voltage controller to make sure that the consumed current is free of abnormality. The consumed current at 60Hz/50Hz in no signal mode is shown below with respect to supply voltage 110V/120V/220V/240V.

Power supply voltage		AC110V	AC120V	AC220V	AC240V
Cousumed current	50 Hz	230 ~ 460mA	220 ~ 440mA	125 ~ 250mA	110 ~ 220mA
	60 Hz	225 ~ 450mA	210 ~ 420mA	120 ~ 240mA	105 ~ 210mA

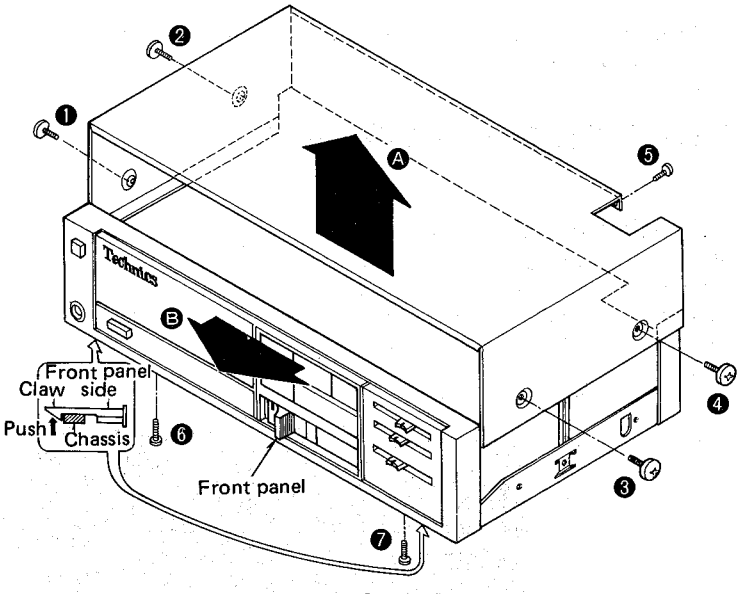
■ DISASSEMBLY INSTRUCTIONS

• How to remove the cabinet [Fig. 1]

1. Remove the 5 setscrews [Fig. 1: ❶ ~ ❺] of the cabinet.
2. Remove the cabinet upward. [See Fig. 1: Ⓐ]

• How to remove the front panel [Fig. 1]

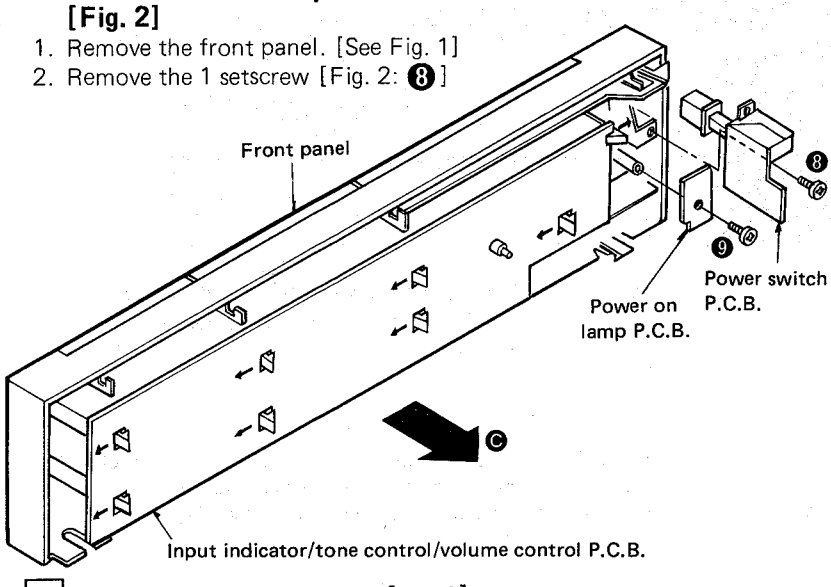
1. Remove the cabinet. [See Fig. 1]
2. Remove the screws ❻, ❼, and two claws at the bottom of front panel.
3. Remove the front panel in the direction of the arrow Ⓑ in Fig. 1.
   (Remove the connector of flat cable as needed. When removing, put a mark on it to prevent faulty insertion.)



[Fig. 1]

• How to remove the power switch P.C.B. [Fig. 2]

1. Remove the front panel. [See Fig. 1]
2. Remove the 1 setscrew [Fig. 2: ❽]



[Fig. 2]

• How to remove power "on" lamp P.C.B. [Fig. 2]

1. Remove the front panel. [See Fig. 1]
2. Remove the 1 setscrew [Fig. 2: ❾]

• How to remove the input indicator/tone control/volume control P.C.B. [Fig. 2, 3]

1. Remove the front panel. [See Fig. 1]
2. Remove the power switch P.C.B. [See Fig. 2]
3. Release the 8 claws in the direction of arrow Ⓒ and pull out the P.C.B. [Fig. 2]

NOTE:

When fitting the front panel, match the depressions of knobs with the projections on the volume sides of sound volume and tone control. [See Fig. 3]

- **How to remove the input selector switch P.C.B. [Fig. 4]**

1. Remove the front panel. [See Fig. 1]
2. Remove the input indicator/tone control/volume control P.C.B. [See Fig. 2, 3]
3. Remove the 2 setscrews [Fig. 4: ⑩, ⑪] and release the 4 claws in the direction of arrow Ⓓ, and pull out the P.C.B.

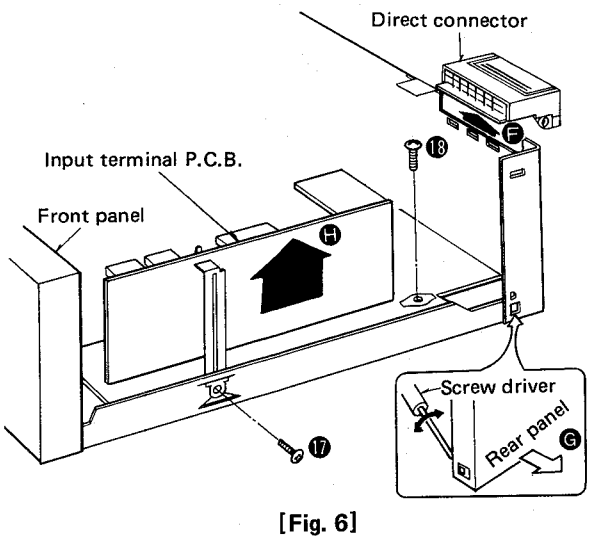
- **How to remove the power IC. [Fig. 5]**

1. Remove the cabinet [See Fig. 1]
2. Remove the screws ⑫ ~ ⑭ (⑬ and ⑭ are red) and shift the main P.C.B. toward the rear panel in the direction of arrow Ⓔ to remove it upward from the chassis.
3. Unsolder of the power IC.
4. Remove the 2 setscrews [Fig. 5: ⑮, ⑯] used to secure the power IC on the heat sink, and then pull the power IC.

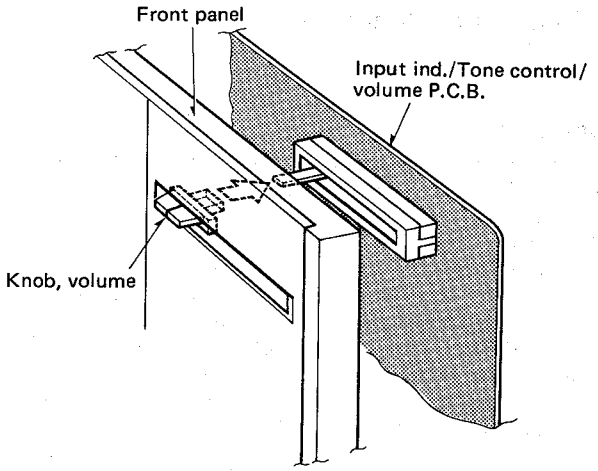
NOTE:
When mounting the power IC, apply silicone compound or equivalent heat diffuser to the rear side of power IC, and then follow the step 1 ~ 3 reversely.

- **How to remove the input terminal P.C.B. [Fig. 6 and Fig. 7]**

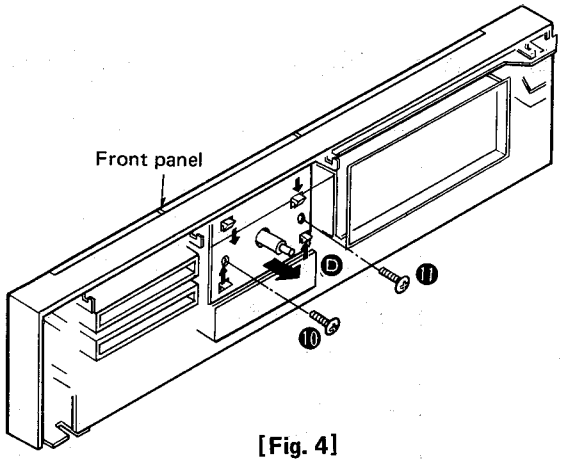
1. Remove the cabinet. [See Fig. 1]
2. Remove the direct connector in the direction of arrow Ⓕ [See Fig. 6]
3. Remove the 2 setscrews. [Fig. 6: ⑰, ⑱]
4. Remove the 5 setscrews. [Fig. 7: ⑲ ~ ㉓]
5. Remove the stopper on either side of rear panel by use of a screwdriver, and then remove the rear panel in the direction of arrow Ⓖ. [See Fig. 6]
6. Remove the input terminal P.C.B. in the direction of arrow Ⓗ. [See Fig. 6]



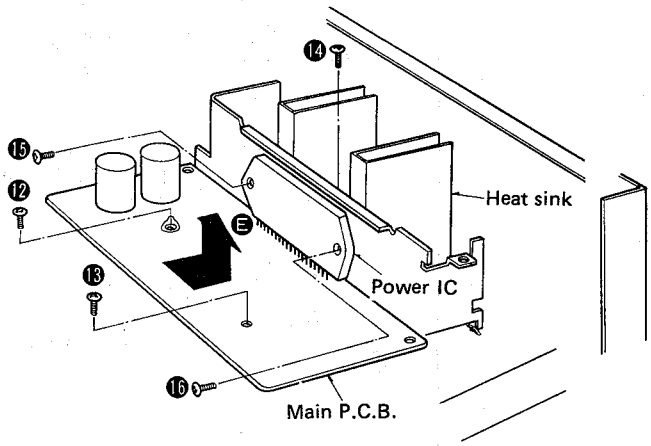
[Fig. 6]



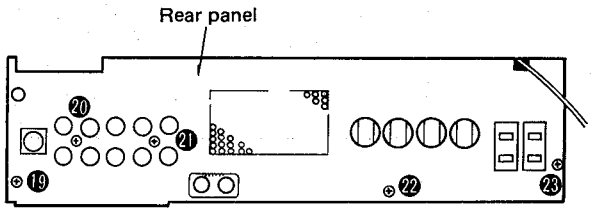
[Fig. 3]



[Fig. 4]



[Fig. 5]



[Fig. 7]

• For United Kingdom

The "EK" indication is shown on the name plate.

Important

THE WIRES IN THIS MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE.

BLUE: NEUTRAL
BROWN: LIVE

As the colours of the wires in the mains lead of this unit may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows. The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.
The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

• For Australia

For your safety

To ensure safe operation the three-pin plug supplied must be inserted only into a standard three-pin power point which is effectively earthed through the normal household wiring. Extension cords used with the unit must be three-core and be correctly wired to provide connection to earth. Wrongly wired extension cords are a major cause of fatalities.
The fact that the unit operates satisfactorily does not imply that the power point is earthed and that the installation is completely safe. For your safety, if in any doubt about the effective earthing of the power point, consult a qualified electrician.

■ TERMINAL GUIDE OF TRANSISTORS, DIODES AND IC'S

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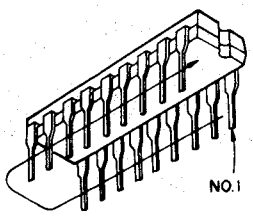
<tr><td colspan="2"> 

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 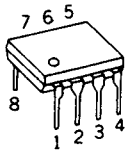
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 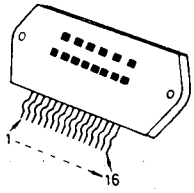
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 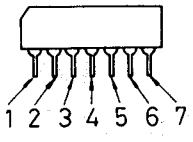
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 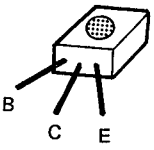
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 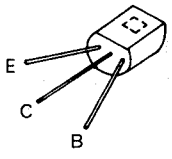
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 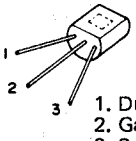

1. Drain
2. Gate
3. Source</td></tr>
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 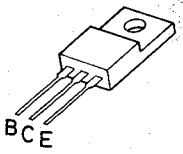
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 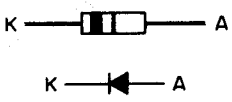
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 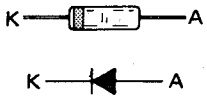
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 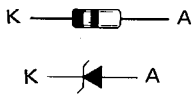
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 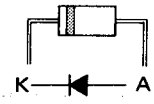
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 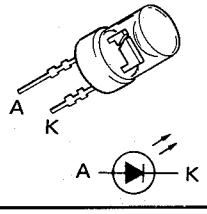
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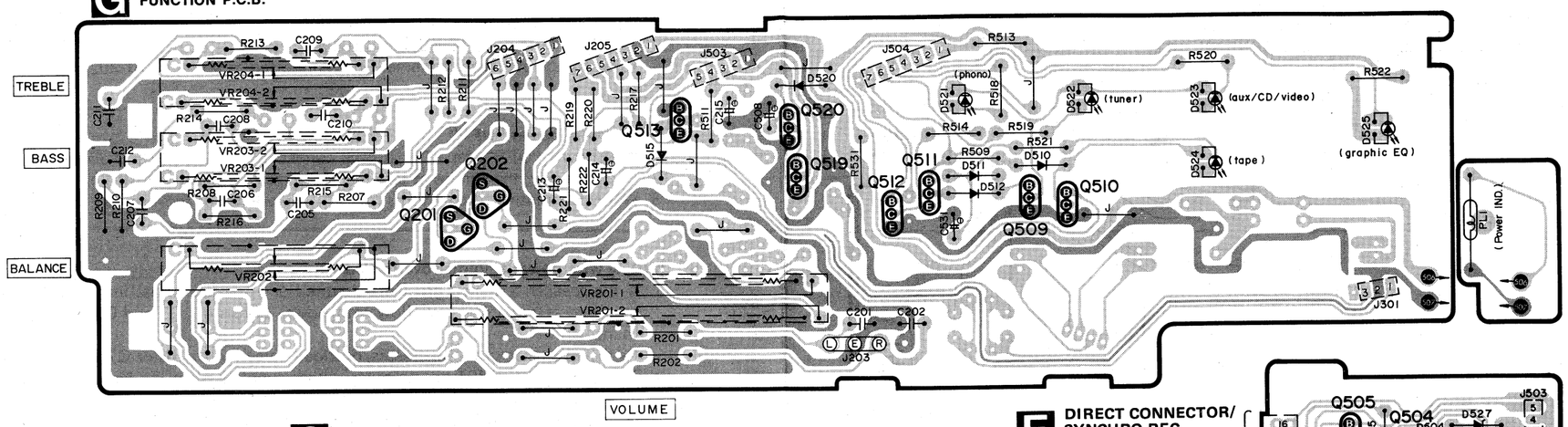
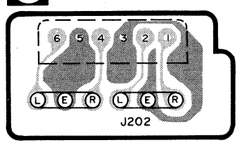
■ PRINTED CIRCUIT BOARDS

Ground (Earth) lines

G FUNCTION P.C.B.

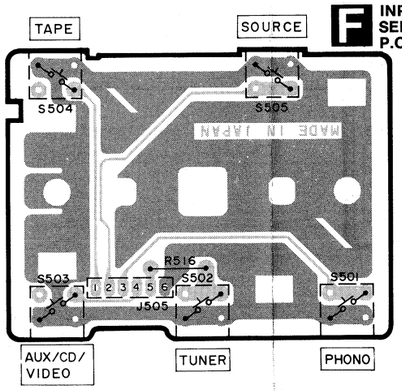


C DIRECT CONNECTOR

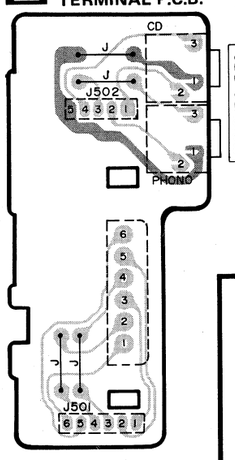


B DIRECT CONNECTOR

F INPUT SELECTOR P.C.B.

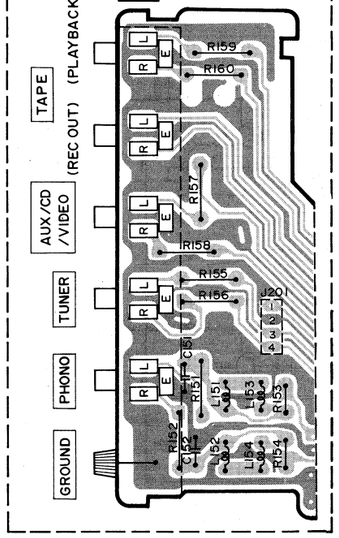


E DIRECT CONNECTOR/ SYNCHRO REC TERMINAL P.C.B.

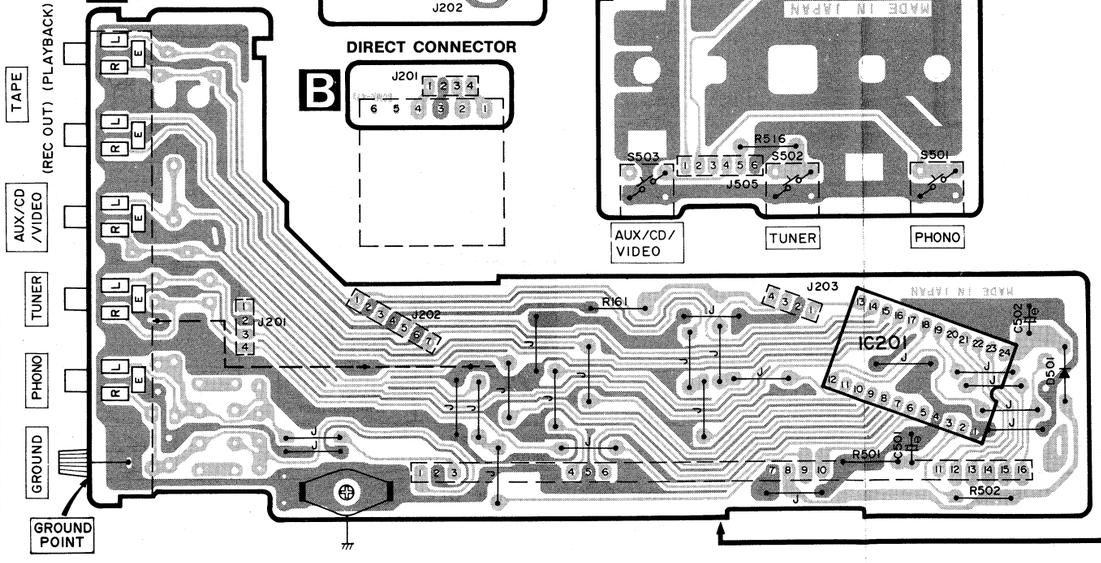


Product for (EGA) only

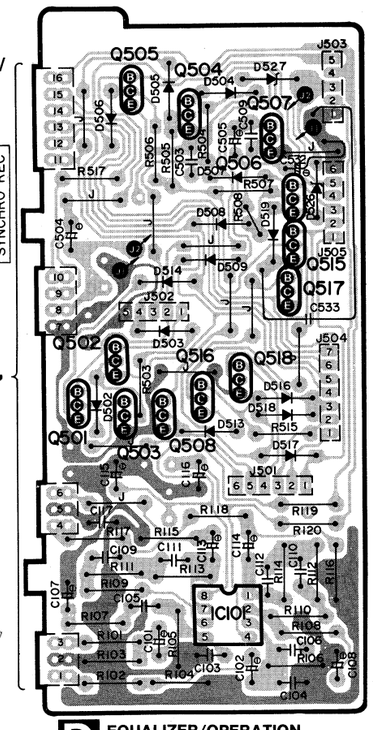
A INPUT/OPERATION CONTROL P.C.B.



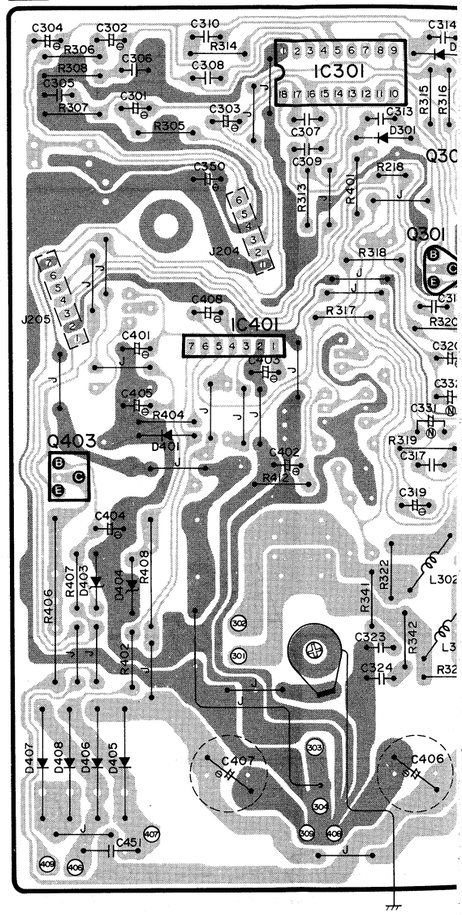
A INPUT/OPERATION CONTROL P.C.B.

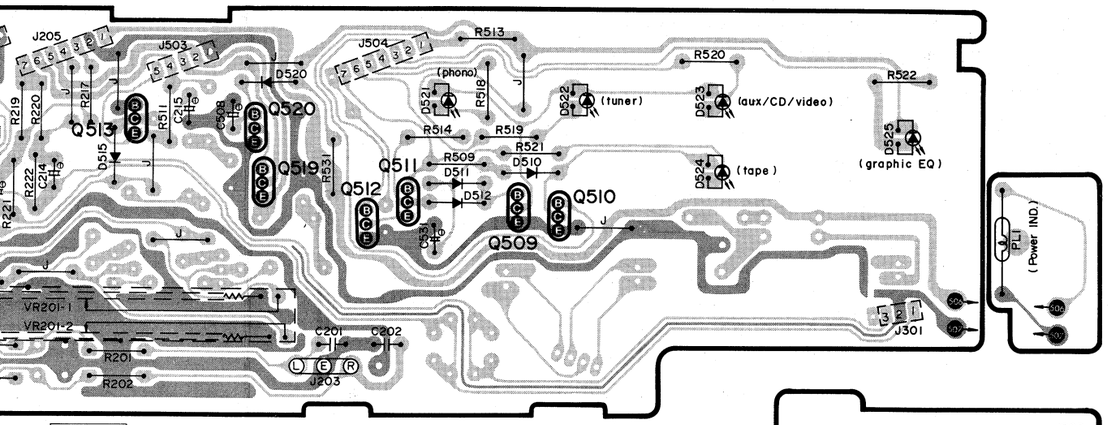


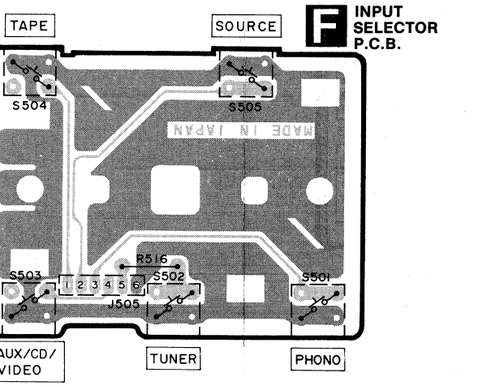
D EQUALIZER/OPERATION CONTROL P.C.B.



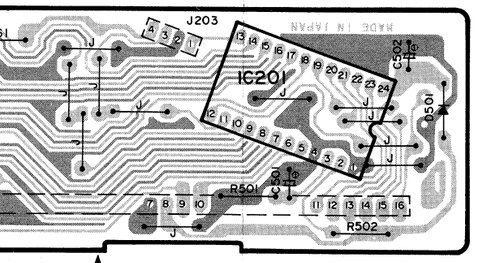
H VOLTAGE AMP/MAIN AMP/PROTECTION/ REGULATOR/POWER SUPPLY P.C.B.



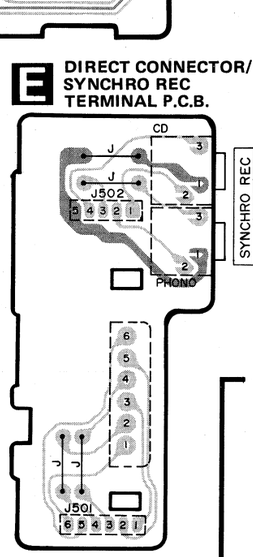


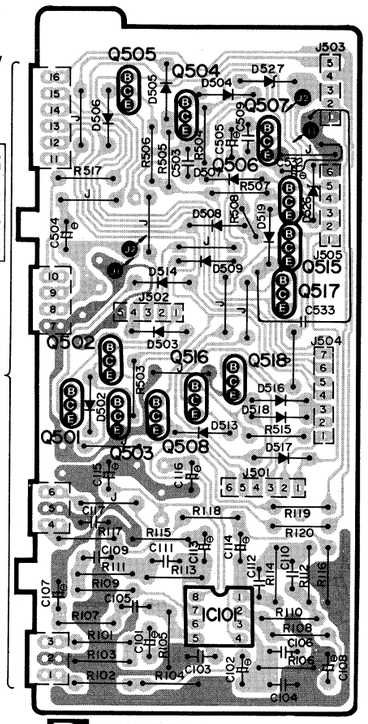


F INPUT SELECTOR P.C.B.



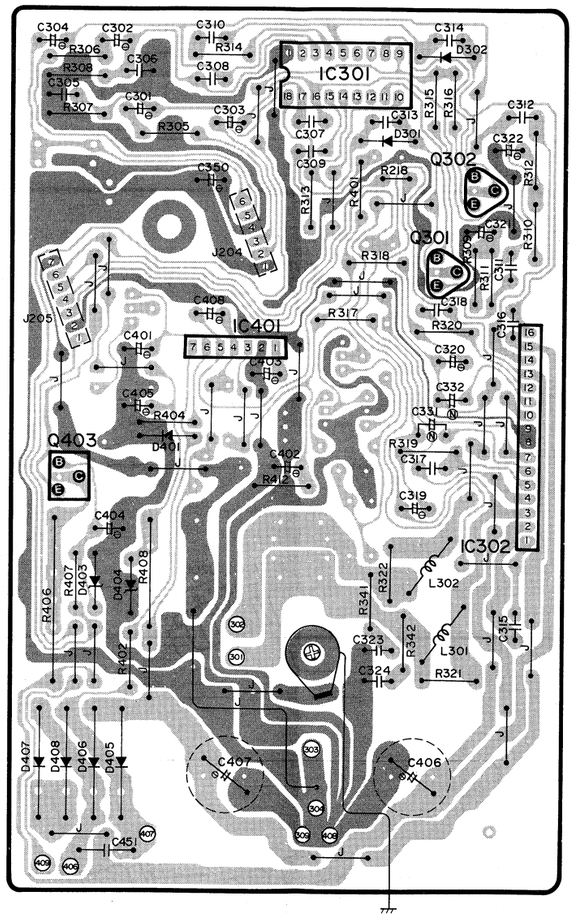
E DIRECT CONNECTOR/ SYNCHRO REC TERMINAL P.C.B.



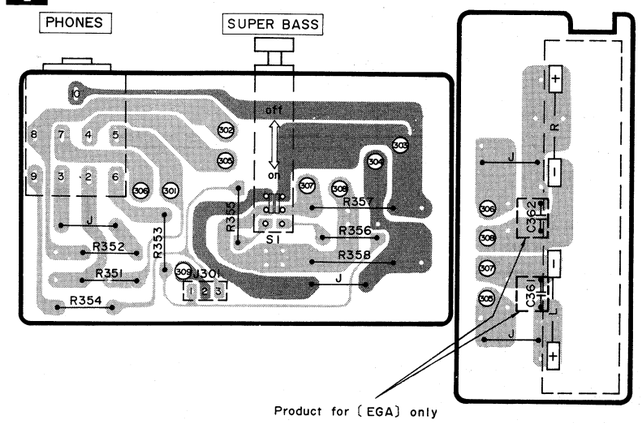


D EQUALIZER/OPERATION CONTROL P.C.B.

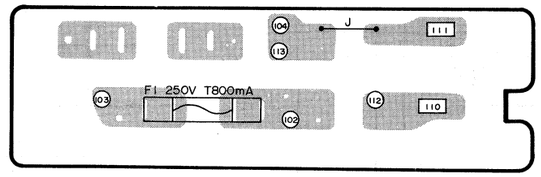
H VOLTAGE AMP/MAIN AMP/PROTECTION/ REGULATOR/POWER SUPPLY P.C.B.

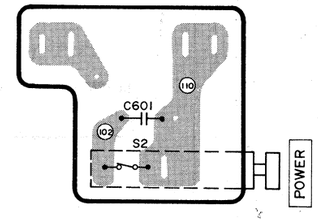


I SUPER BASS/HEADPHONES P.C.B.

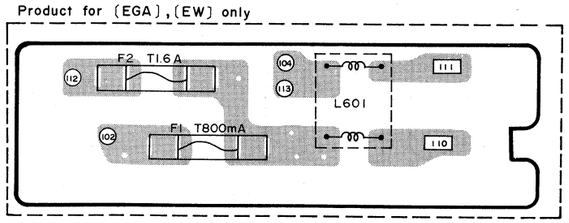


Product for (EGA) only

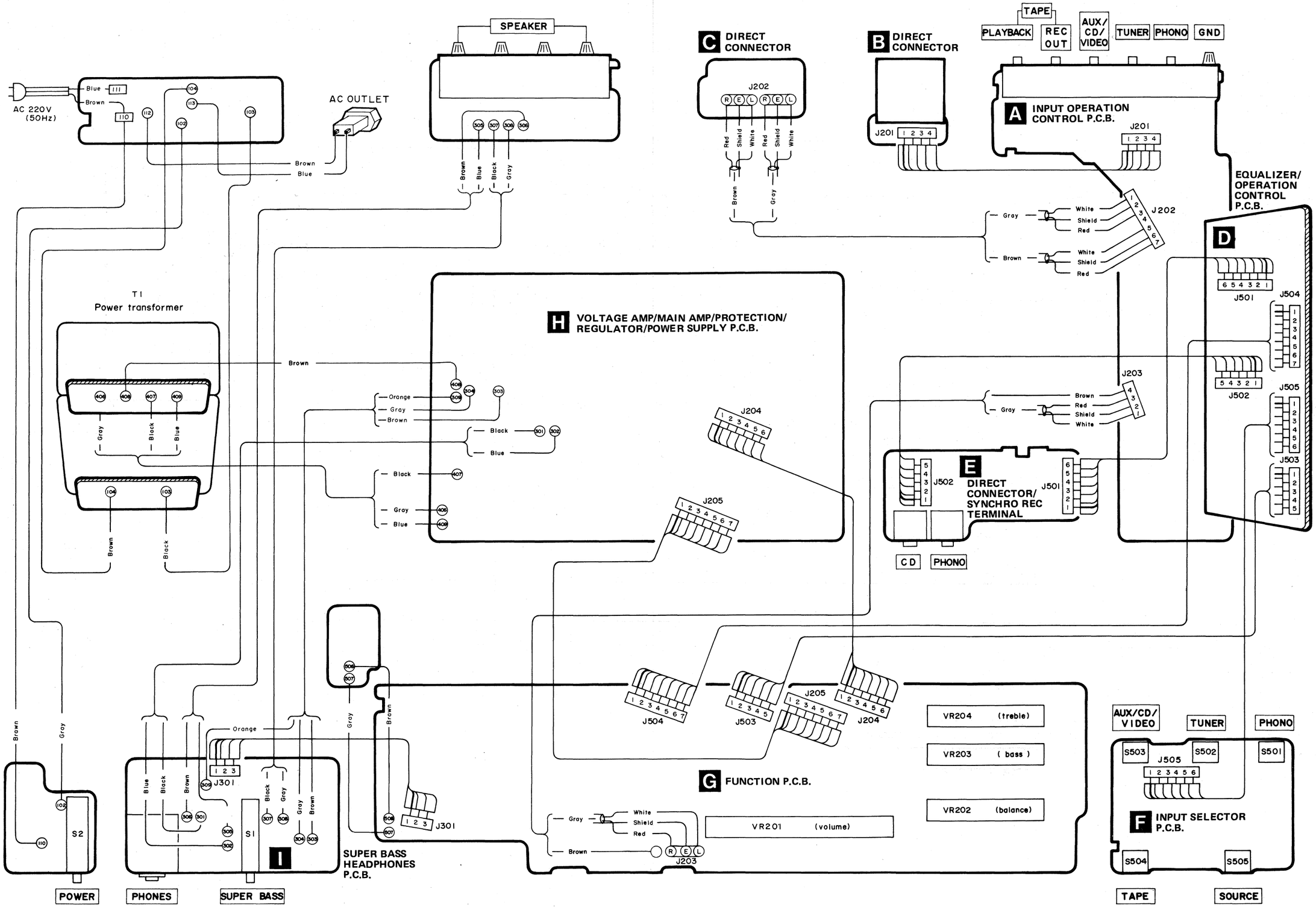




Product for (EGA),(EW) only



■ CIRCUIT BOARDS AND WIRING CONNECTION DIAGRAM (Top View)



■ POWER AM

- **Operational desc (power ON/OFF**

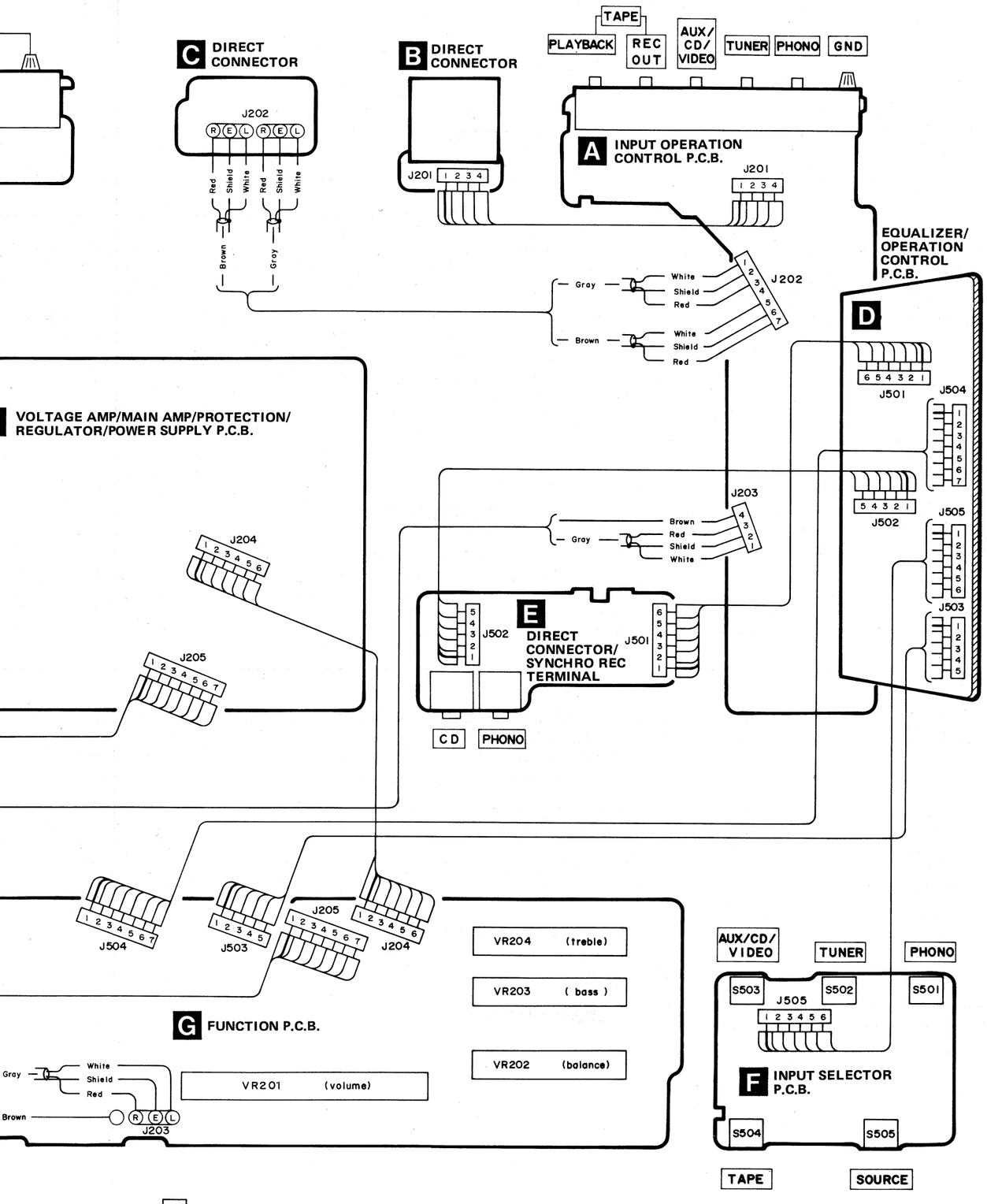
  * **Muting with po**
  1. With power
  2. Subsequentl increases.
  3. When the vo voltage at te
  4. IC302 is ope

  * **Muting with po**
  1. With power
  2. Consequentl
  3. When the m

  * **Muting with po**
  1. If the speak then excessi to increase.
  2. As the volta
  3. Terminal ⑤ potential at ④ of IC401

Power "O
V
0

op View)



■ POWER AMPLIFIER PROTECTION

- **Operational description of IC(IC401) for muting (power ON/OFF, overload detection)**

*** Muting with power "ON"**

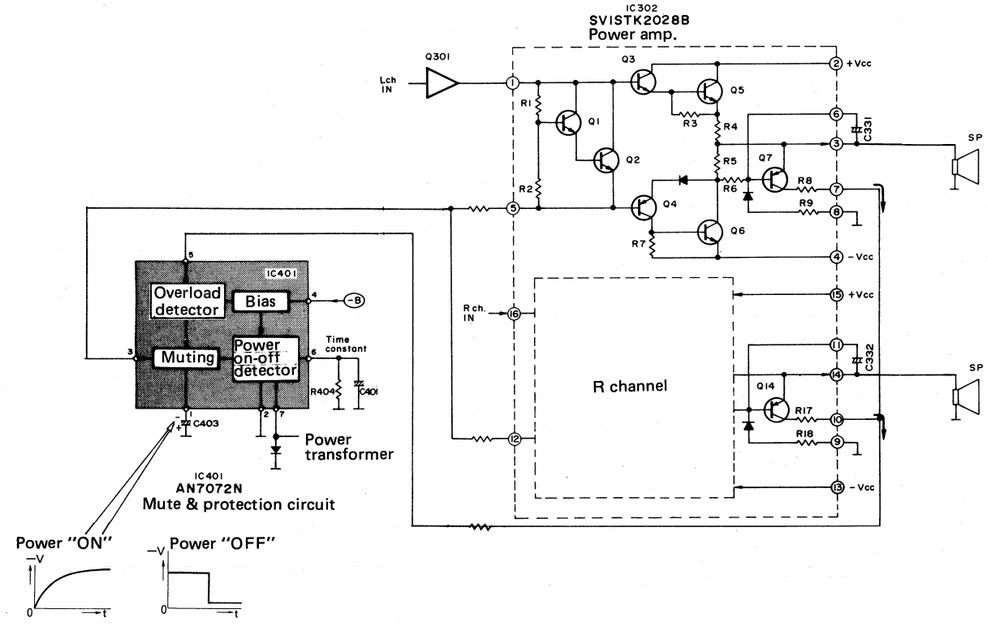
1. With power "ON", negative voltage is applied to terminal ⑦ of IC401.
2. Subsequently, capacitor (C403) connected to terminal ① is charged, and the voltage at terminal ① gradually increases.
3. When the voltage becomes nearly −4V (about 5 sec. after power "ON"), the muting circuit turns "ON" and then the voltage at terminal ③ becomes −29.8V.
4. IC302 is operated since terminal ③ is connected to power IC (IC302).

*** Muting with power "OFF"**

1. With power "OFF", capacitor (C403) connected to terminal ① is discharged.
2. Consequently, the voltage at terminal ① decreases, and the muting circuit in IC turns "OFF".
3. When the muting circuit turns "OFF", the voltage at terminal ③ becomes 0V, causing IC302 to stop operating.

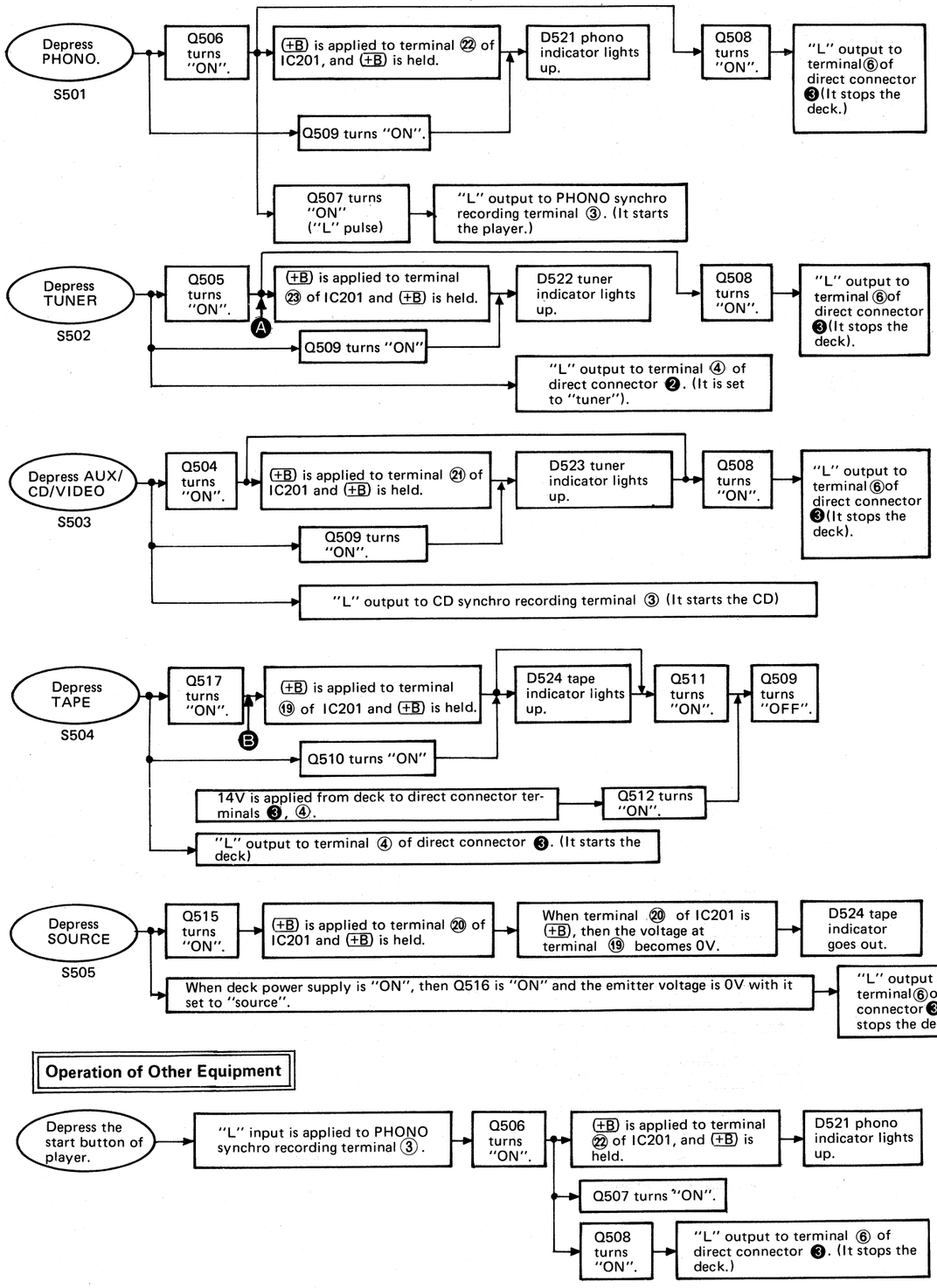
*** Muting with power amplifier overloaded**

1. If the speaker terminals are short-circuited or a speaker whose impedance is less than the rating of this unit is used, then excessive current will flow into power transistors Q5 and Q6, causing the voltage across emitter resistor R5 to increase.
2. As the voltage across R5 increases, overload detection transistor Q7 turns "ON".
3. Terminal ⑤ of IC401 has negative voltage supplied from the bias current of IC401. And when Q7 turns ON, the potential at terminal ⑤ of IC401 decreases (nearly 0V). When the potential difference between terminals ⑤ and ④ of IC401 exceeds 0.6V, the muting circuit turns "OFF" and the voltage at terminal ③ becomes 0V.



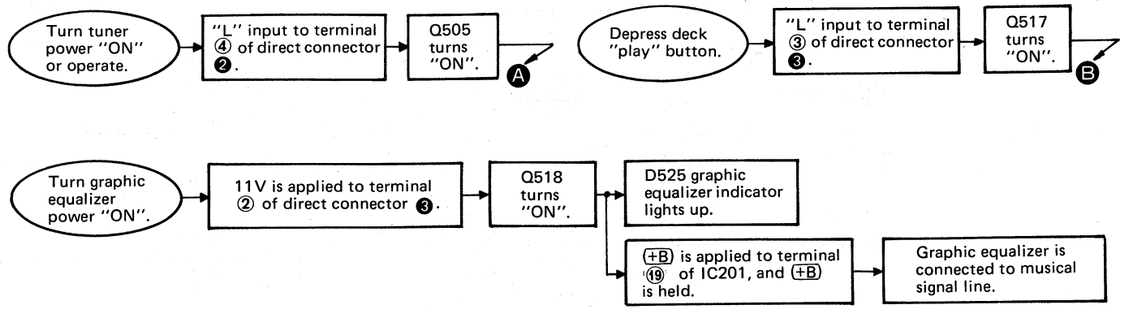
■ OPERATION CONTROL CHART

Operation of This Unit

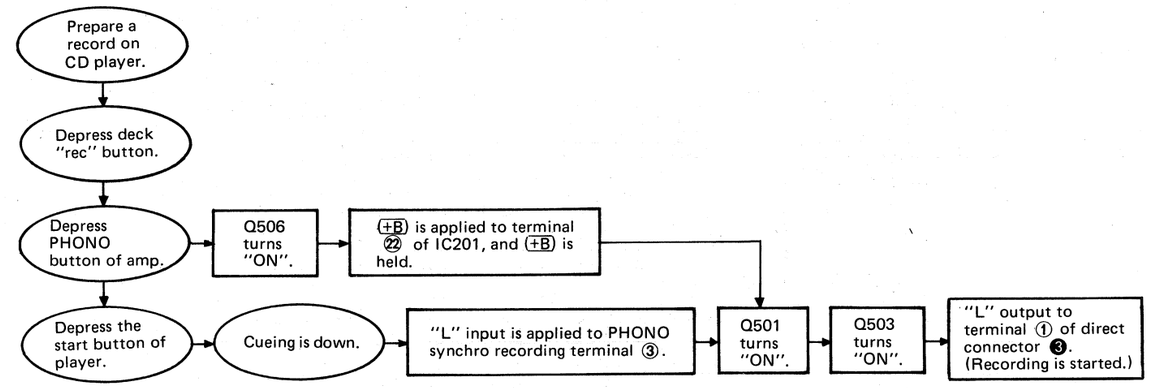

Depress PHONO.
S501
Q506 turns "ON".
+B is applied to terminal ㉒ of IC201, and +B is held.
D521 phono indicator lights up.
Q508 turns "ON".
"L" output to terminal ⑥ of direct connector ❸ (It stops the deck.)
Q509 turns "ON".
Q507 turns "ON" ("L" pulse)
"L" output to PHONO synchro recording terminal ③. (It starts the player.)
Depress TUNER
S502
Q505 turns "ON".
A
+B is applied to terminal ㉓ of IC201 and +B is held.
D522 tuner indicator lights up.
Q508 turns "ON".
"L" output to terminal ⑥ of direct connector ❸ (It stops the deck).
Q509 turns "ON"
"L" output to terminal ④ of direct connector ❷. (It is set to "tuner").
Depress AUX/ CD/VIDEO
S503
Q504 turns "ON".
+B is applied to terminal ㉑ of IC201 and +B is held.
D523 tuner indicator lights up.
Q508 turns "ON".
"L" output to terminal ⑥ of direct connector ❸ (It stops the deck).
Q509 turns "ON".
"L" output to CD synchro recording terminal ③ (It starts the CD)
Depress TAPE
S504
Q517 turns "ON".
B
+B is applied to terminal ⑲ of IC201 and +B is held.
D524 tape indicator lights up.
Q511 turns "ON".
Q509 turns "OFF".
Q510 turns "ON"
14V is applied from deck to direct connector terminals ❸, ④.
Q512 turns "ON".
"L" output to terminal ④ of direct connector ❸. (It starts the deck)
Depress SOURCE
S505
Q515 turns "ON".
+B is applied to terminal ⑳ of IC201 and +B is held.
When terminal ⑳ of IC201 is +B, then the voltage at terminal ⑲ becomes 0V.
D524 tape indicator goes out.
When deck power supply is "ON", then Q516 is "ON" and the emitter voltage is 0V with it set to "source".
"L" output to terminal ⑥ of direct connector ❸ (It stops the deck.)

Operation of Other Equipment

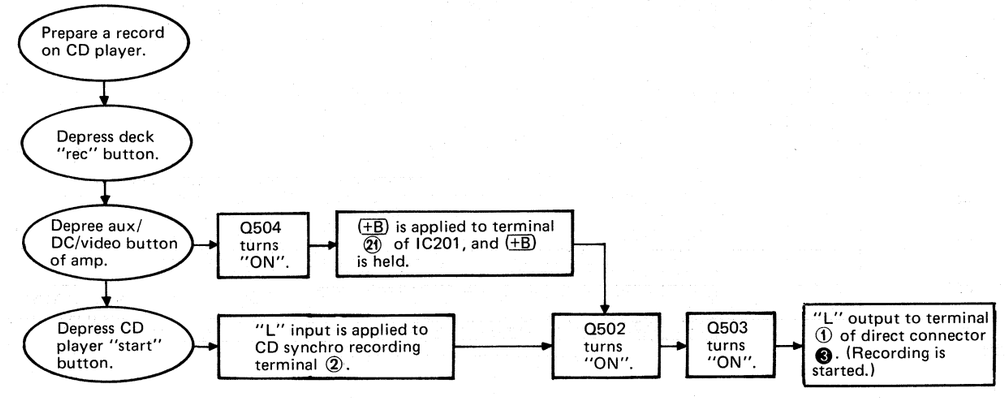
Depress the start button of player.
"L" input is applied to PHONO synchro recording terminal ③.
Q506 turns "ON".
+B is applied to terminal ㉒ of IC201, and +B is held.
D521 phono indicator lights up.
Q507 turns "ON".
Q508 turns "ON".
"L" output to terminal ⑥ of direct connector ❸. (It stops the deck.)


Turn tuner power "ON" or operate.
"L" input to terminal ④ of direct connector ❷.
Q505 turns "ON".
A
Depress deck "play" button.
"L" input to terminal ③ of direct connector ❸.
Q517 turns "ON".
B
Turn graphic equalizer power "ON".
11V is applied to terminal ② of direct connector ❸.
Q518 turns "ON".
D525 graphic equalizer indicator lights up.
+B is applied to terminal ⑲ of IC201, and +B is held.
Graphic equalizer is connected to musical signal line.

Synchro Recording of Player


Prepare a record on CD player.
Depress deck "rec" button.
Depress PHONO button of amp.
Q506 turns "ON".
+B is applied to terminal ㉒ of IC201, and +B is held.
Depress the start button of player.
Cueing is down.
"L" input is applied to PHONO synchro recording terminal ③.
Q501 turns "ON".
Q503 turns "ON".
"L" output to terminal ① of direct connector ❸. (Recording is started.)

CD Synchro Recording


Prepare a record on CD player.
Depress deck "rec" button.
Depree aux/ DC/video button of amp.
Q504 turns "ON".
+B is applied to terminal ㉑ of IC201, and +B is held.
Depress CD player "start" button.
"L" input is applied to CD synchro recording terminal ②.
Q502 turns "ON".
Q503 turns "ON".
"L" output to terminal ① of direct connector ❸. (Recording is started.)

■ TERM

(. . . . .) Te

① Tuner signa
② Tuner signa
③ Tuner signa
④ Tuner ➡ over (Amp with tuner with preset
⑤ . . . . . .
⑥ . . . . . .

① Rec out sig
② Rec out sig
③ Rec out sig
④ Playback si
⑤ Playback si
⑥ Playback si

① Signal inpu
② Signal inpu
③ Signal inpu
④ Signal outp
⑤ Signal outp
⑥ Signal outp

① Rec out sig
② Rec out sig
③ Rec out sig
④ Playback si
⑤ Playback si
⑥ Playback si

① Signal inpu
② Signal inpu
③ Signal inpu
④ Signal outp
⑤ Signal outp
⑥ Signal outp

DIRECT CO
★With tuner
ing station
① ~ ③ 0
(Note) DC 1
So, a
DIRECT CO
★With amp.
"tuner" —
① ~ ③ 0
DIRECT CO
★With amp.
"tape" —
①, ② 0V
★With amp.
"tuner" —
① 7V ②
★With amp
connector,
set to "tap
① 5.5V ②
★With amp
connector,
"play" but
① 5.5V
⑥ 3.9V

' output to
minal ⑥ of
ect connector
t stops the
k.)

." output to
rminal ⑥ of
rect connector
(It stops the
ck).

" output to
minal ⑥ of
ect connector
It stops the
ck).

D524 tape
ndicator
goes out.

"L" output to terminal ⑥ of direct connector ❸ (It stops the deck.)

521 phono
dicator lights
.

nal ⑥ of
(It stops the

Turn tuner power "ON" or operate. → "L" input to terminal ④ of direct connector ❷. → Q505 turns "ON". → Ⓐ

Depress deck "play" button. → "L" input to terminal ③ of direct connector ❸. → Q517 turns "ON". → Ⓑ

Turn graphic equalizer power "ON". → 11V is applied to terminal ② of direct connector ❸. → Q518 turns "ON". → D525 graphic equalizer indicator lights up.

(+B) is applied to terminal ⑲ of IC201, and (+B) is held. → Graphic equalizer is connected to musical signal line.

Synchro Recording of Player

Prepare a record on CD player.

Depress deck "rec" button.

Depress PHONO button of amp. → Q506 turns "ON". → (+B) is applied to terminal ㉒ of IC201, and (+B) is held.

Depress the start button of player. → Cueing is down. → "L" input is applied to PHONO synchro recording terminal ③. → Q501 turns "ON". → Q503 turns "ON". → "L" output to terminal ① of direct connector ❸. (Recording is started.)

CD Synchro Recording

Prepare a record on CD player.

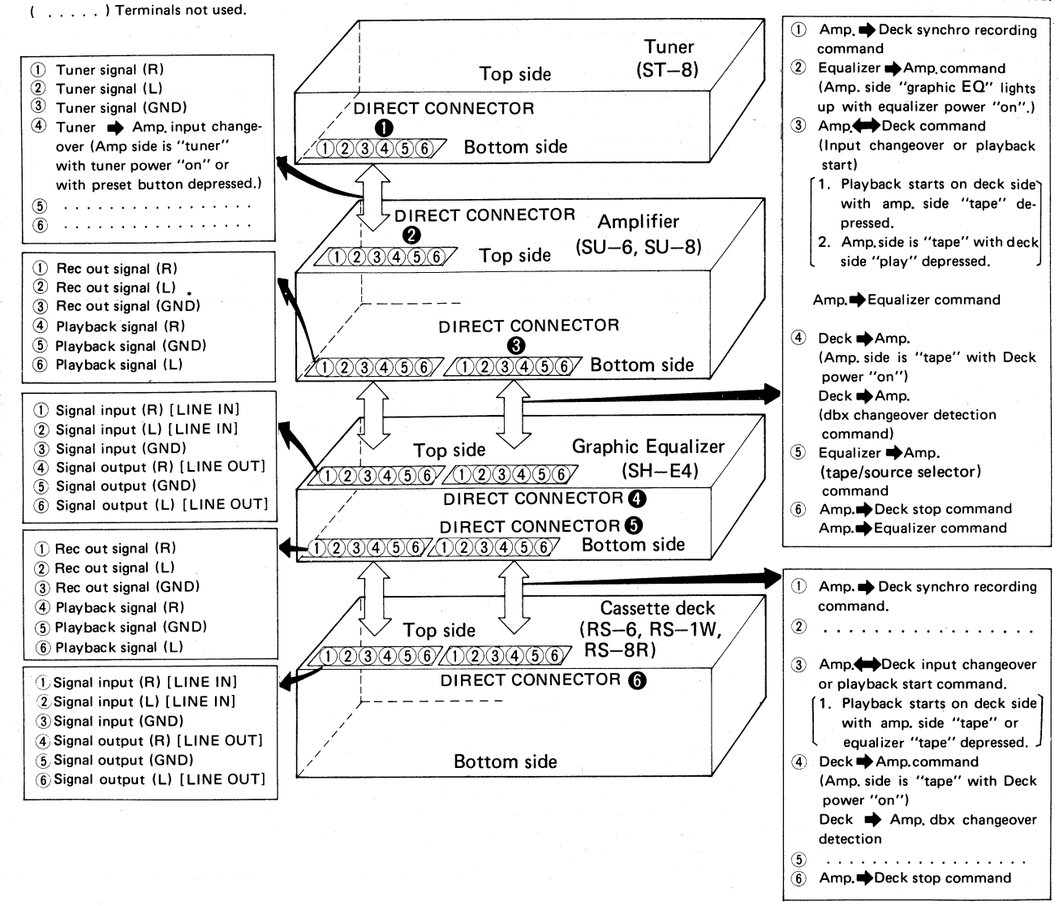
Depress deck "rec" button.

Depree aux/ DC/video button of amp. → Q504 turns "ON". → (+B) is applied to terminal ㉑ of IC201, and (+B) is held.

Depress CD player "start" button. → "L" input is applied to CD synchro recording terminal ②. → Q502 turns "ON". → Q503 turns "ON". → "L" output to terminal ① of direct connector ❸. (Recording is started.)

■ TERMINAL FUNCTION OF DIRECT CONNECTOR

(. . . . .) Terminals not used.


① Tuner signal (R)
② Tuner signal (L)
③ Tuner signal (GND)
④ Tuner ➡ Amp. input changeover (Amp side is "tuner" with tuner power "on" or with preset button depressed.)
⑤ . . . . . .
⑥ . . . . . .
Tuner (ST–8)
Top side
DIRECT CONNECTOR ❶
1 2 3 4 5 6
Bottom side
① Rec out signal (R)
② Rec out signal (L)
③ Rec out signal (GND)
④ Playback signal (R)
⑤ Playback signal (GND)
⑥ Playback signal (L)
DIRECT CONNECTOR ❷
Amplifier (SU–6, SU–8)
Top side
DIRECT CONNECTOR ❸
Bottom side
① Signal input (R) [LINE IN]
② Signal input (L) [LINE IN]
③ Signal input (GND)
④ Signal output (R) [LINE OUT]
⑤ Signal output (GND)
⑥ Signal output (L) [LINE OUT]
Top side
Graphic Equalizer (SH–E4)
DIRECT CONNECTOR ❹
DIRECT CONNECTOR ❺
Bottom side
① Rec out signal (R)
② Rec out signal (L)
③ Rec out signal (GND)
④ Playback signal (R)
⑤ Playback signal (GND)
⑥ Playback signal (L)
① Signal input (R) [LINE IN]
② Signal input (L) [LINE IN]
③ Signal input (GND)
④ Signal output (R) [LINE OUT]
⑤ Signal output (GND)
⑥ Signal output (L) [LINE OUT]
Top side
Cassette deck (RS–6, RS–1W, RS–8R)
DIRECT CONNECTOR ❻
Bottom side

(. . . . .) Terminals not used.

① Amp. ➡ Deck synchro recording command
② Equalizer ➡ Amp. command (Amp. side "graphic EQ" lights up with equalizer power "on".)
③ Amp. ⟷ Deck command (Input changeover or playback start)
1. Playback starts on deck side with amp. side "tape" depressed.
2. Amp. side is "tape" with deck side "play" depressed.

Amp. ➡ Equalizer command

④ Deck ➡ Amp. (Amp. side is "tape" with Deck power "on") Deck ➡ Amp. (dbx changeover detection command)
⑤ Equalizer ➡ Amp. (tape/source selector) command
⑥ Amp. ➡ Deck stop command Amp. ➡ Equalizer command

① Amp. ➡ Deck synchro recording command.
② . . . . . .
③ Amp. ⟷ Deck input changeover or playback start command.
1. Playback starts on deck side with amp. side "tape" or equalizer "tape" depressed.

④ Deck ➡ Amp. command (Amp. side is "tape" with Deck power "on") Deck ➡ Amp. dbx changeover detection
⑤ . . . . . .
⑥ Amp. ➡ Deck stop command

Terminal ⑥ is not used in RS–1W.

DIRECT CONNECTOR ❶

★With tuner power switch turned "on" or a broadcasting station selected —
① ~ ③ 0V ④ 7.4V (instant) ⑤, ⑥ 0V

(Note) DC 14V is applied to terminal ④ from amp. side. So, apply DC 14V to terminal ④ when checking.

DIRECT CONNECTOR ❷

★With amp. power switch turned "on" and input set to "tuner" —
① ~ ③ 0V ④ 7.4V (instant) ⑤, ⑥ 0V

DIRECT CONNECTOR ❸

★With amp. power switch turned "on" and input set to "tape" —
①, ② 0V ③ 13.2V ④ 0V ⑤ 10V ⑥ 0V

★With amp. power switch turned "on" and input set to "tuner" —
① 7V ② 0V ③ 4V ④ 11.8V ⑤ 4V ⑥ 5.5V

★With amp. and cassette deck connected by direct connector, power switch turned "on", and amp. input set to "tape" —
① 5.5V ② 4.7V ③ 0V ④ 4.6V ⑤ 10.4V ⑥ 13.6V

★With amp. and cassette deck connected by direct connector, power switch "on", and cassette deck "play" button depressed —
① 5.5V ② 4.5V ③ 11.9V ④ 4.3V ⑤ 10.3V ⑥ 3.9V

DIRECT CONNECTOR ❹

★With graphic equalizer power switch turned "on" and tape monitor switch set to "source" —
① 0V ② 14.5V ③ 7V ④ ~ ⑥ 0V

★With graphic equalizer power switch turned "on" and tape monitor switch set to "tape" —
① 0V ② 14.5V ③ ~ ⑥ 0V

DIRECT CONNECTOR ❺

★With graphic equalizer power switch turned "on" and tape monitor switch set to "source" —
①, ② 0V ③ 7V ④ ~ ⑥ 0V

★With graphic equalizer power switch turned "on" and tape monitor switch set to "tape" —
① ~ ⑥ 0V

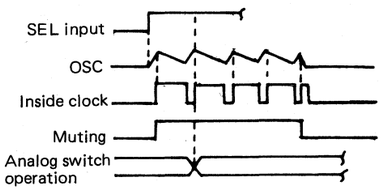
DIRECT CONNECTOR ❻

★With cassette deck power switch turned "on" —
① 5.5V ② 0V ③ 4.9V ④ 5.5V ⑤, ⑥ 0V

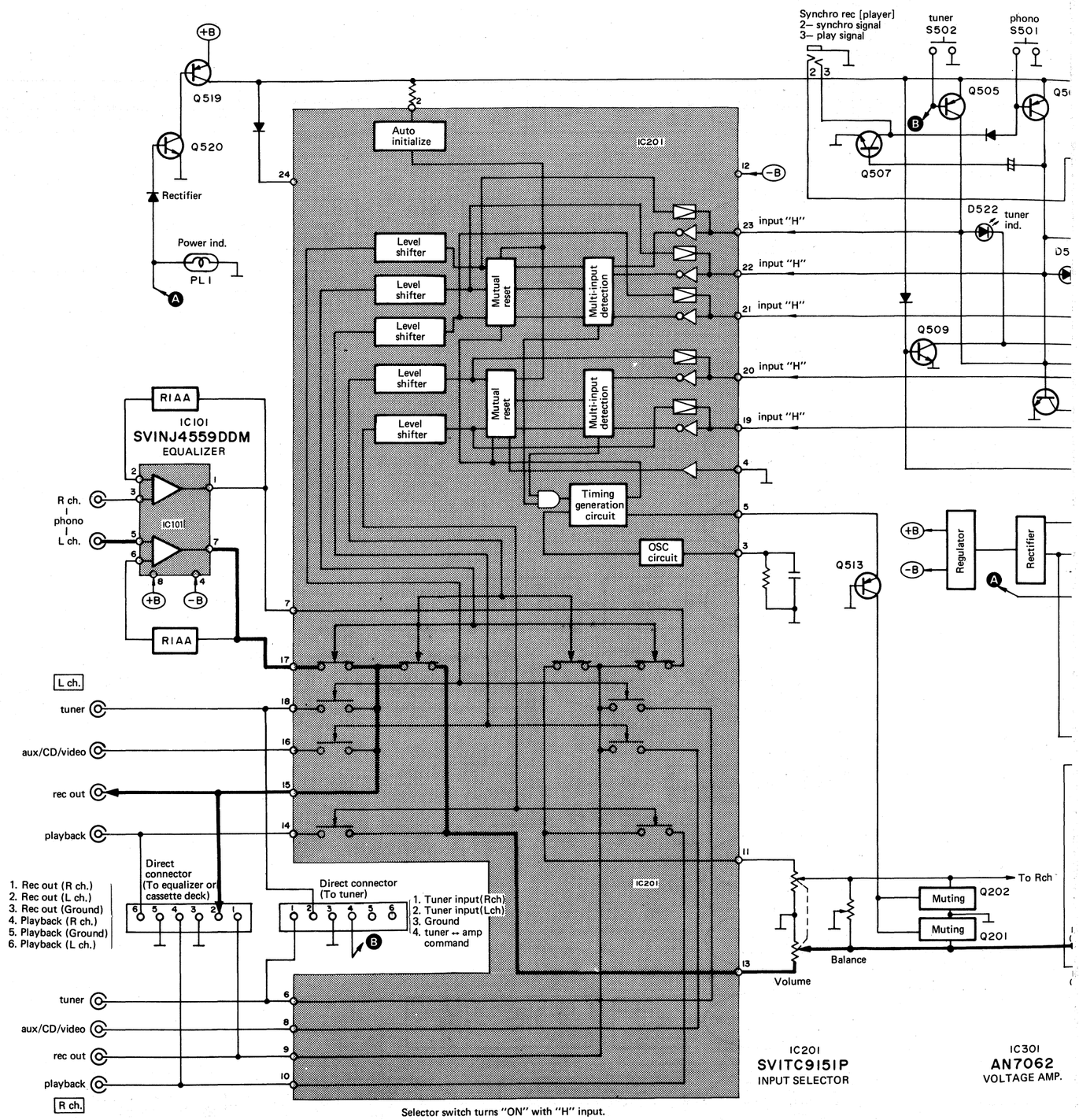
★With cassette deck power switch turned "on" and "play" button depressed —
① 5.5V ② 0V ③ 4.9V ④ 5.5V ⑤ 0V ⑥ 4.9V

★With noise reduction switch of cassette deck set to "dbx" —
① 5.5V ② ~ ⑥ 0V

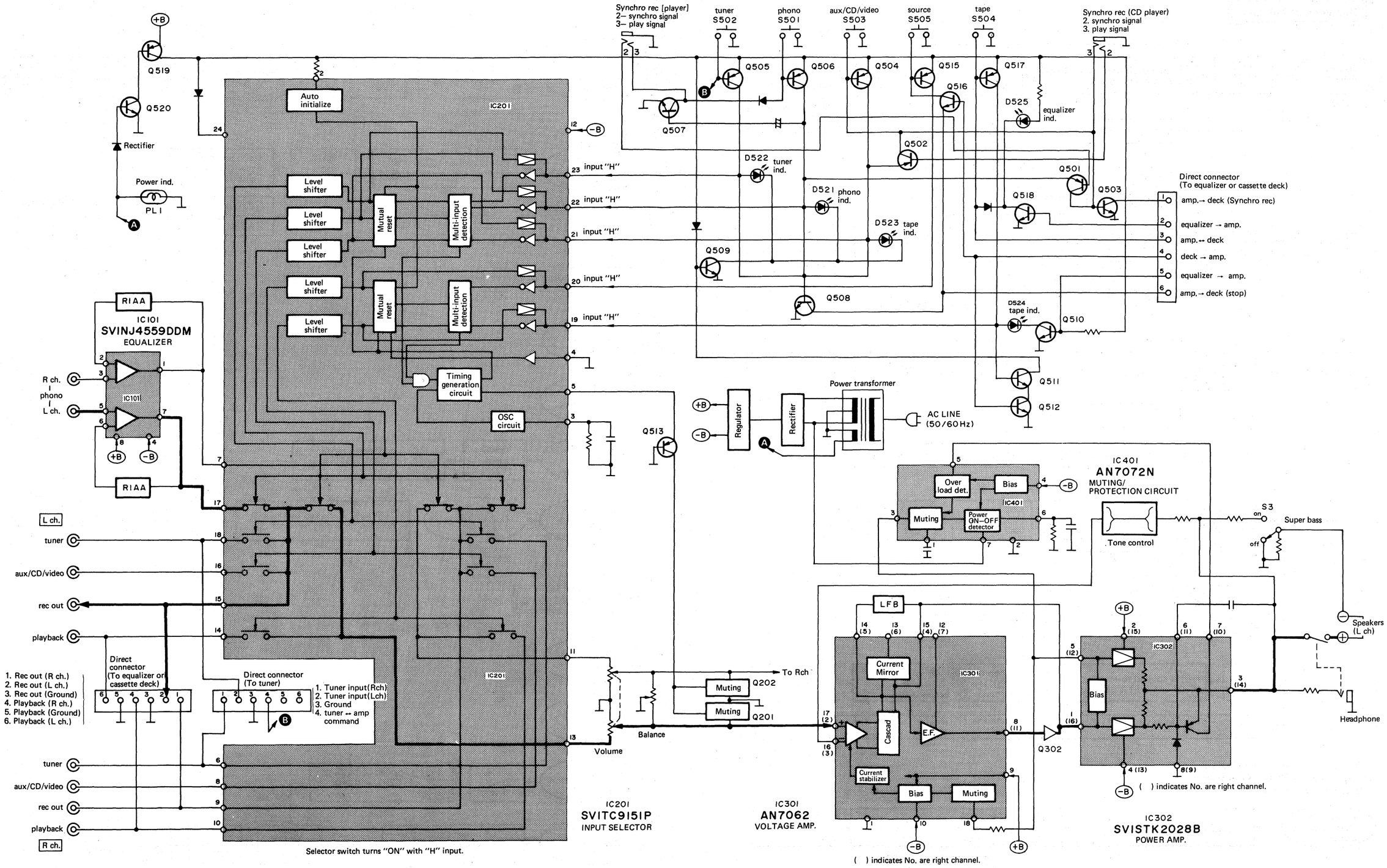
■ FUNCTION OF TERMINAL (FUNCTION SELECTOR IC201)

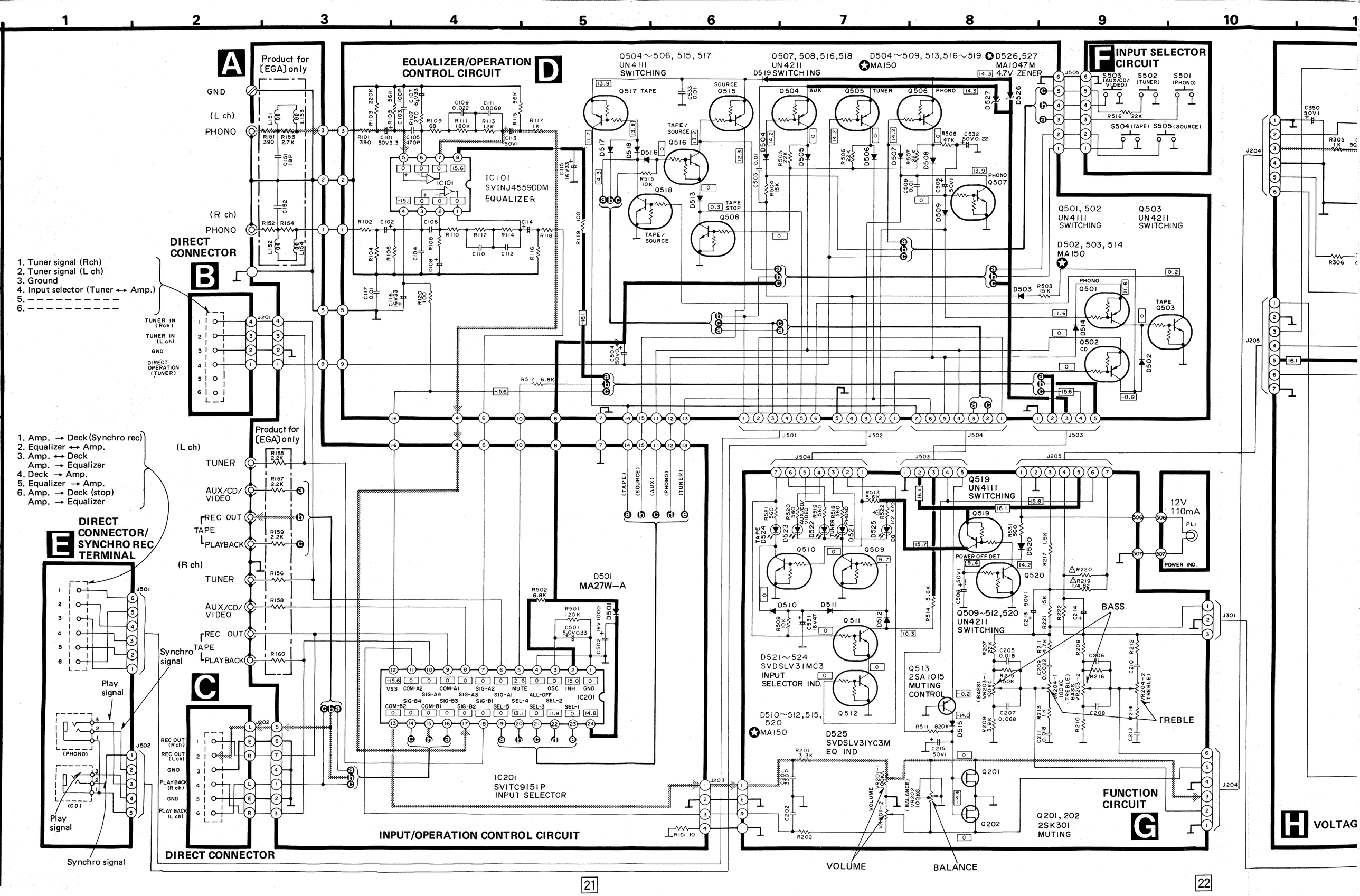
Pin No.	Mark	Description of terminal
1	GND	Ground terminal.
2	INH	Inhibit input terminal Normal operation at "H" level, and inhibit mode at "L" level.
3	OSC	C • R connection terminal for oscillator Muting time and analog switch timing are set according to the frequency of this oscillator. Usually, oscillator is stopped but starts oscillating with SEL input, and stops after delivery of 5 clock output.
4	ALL-OFF	OFF assigning input terminal for all analog switches. When this terminal is at "H" level, all analog switches turn OFF.
5	MUTE	Muting signal output terminal. This terminal is at "H" level for a specific period of time when select input (SEL-1 ~ SEL-5) terminals receive "H" level, and analog switches are operated within that period. Muting output time can be freely designed according to OSC frequency. 
6 18	SIG-A1 SIG-B1	Signal input terminal 1. (Tuner input) With SEL-1 selected, analog switch 1 turns ON, and then it conducts between this terminal and COM-1 terminal.
7 17	SIG-A2 SIG-B2	Signal input terminal 2. (Phono input) With SEL-2 selected, analog switch 2 turns ON, and then it conducts between this terminal and COM-1 terminal.
8 16	SIG-A3 SIG-B3	Signal input terminal 3. (Aux/CD/Video input) With SEL-3 selected, analog switch 3 turns ON, and then it conducts between this terminal and COM-1 terminal.
9 15	COM-A1 COM-B1	Analog switch common terminal 1. (Rec out) Analog switch common to $SIG_1 \sim SIG_3$.
10 14	SIG-A4 SIG-B4	Signal input terminal 4. (Playback) With SEL-5 selected, analog switch 5 turns ON, and then it conducts between this terminal and COM-2 terminal. With SEL-4 selected, analog switch 4 turns ON, and then it conducts between this terminal and then analog switch 5 turns off.
11 13	COM-A2 COM-B2	Analog switch common terminal 2. Common terminal of analog switches 4 and 5.
12	Vss	Apply −15V.
19 20 21 22 23	SEL-5 SEL-4 SEL-3 SEL-2 SEL-1	Select input terminal of each analog switch. When SEL-1 ~ SEL-5 terminals are at "H" level, each analog switch selected turns ON. SEL-1, SEL-2, SEL-3, and SEL-4, SEL-5 are of mutual reset types, and are OFF except in case of selected input. This terminal is an I/O terminal, also used for driver output for display. (LED driver is turned ON by inside latch circuit with "H" level input, and it is fixed at "H" level even when shifted to "L" level.)
24	VDD	Apply 15V.

■ BLOCK DIAGRAM

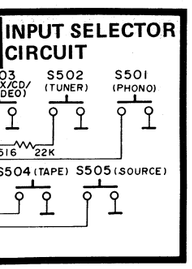


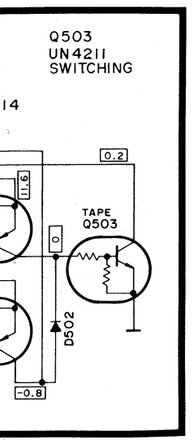
■ BLOCK DIAGRAM

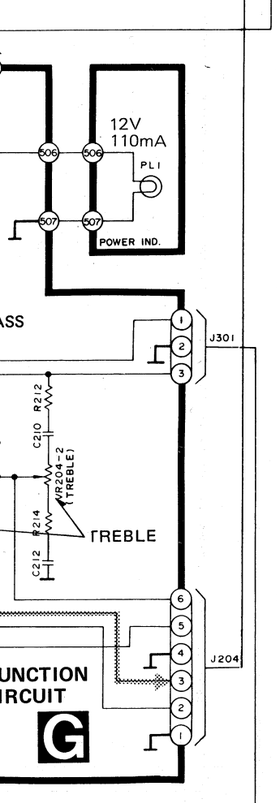


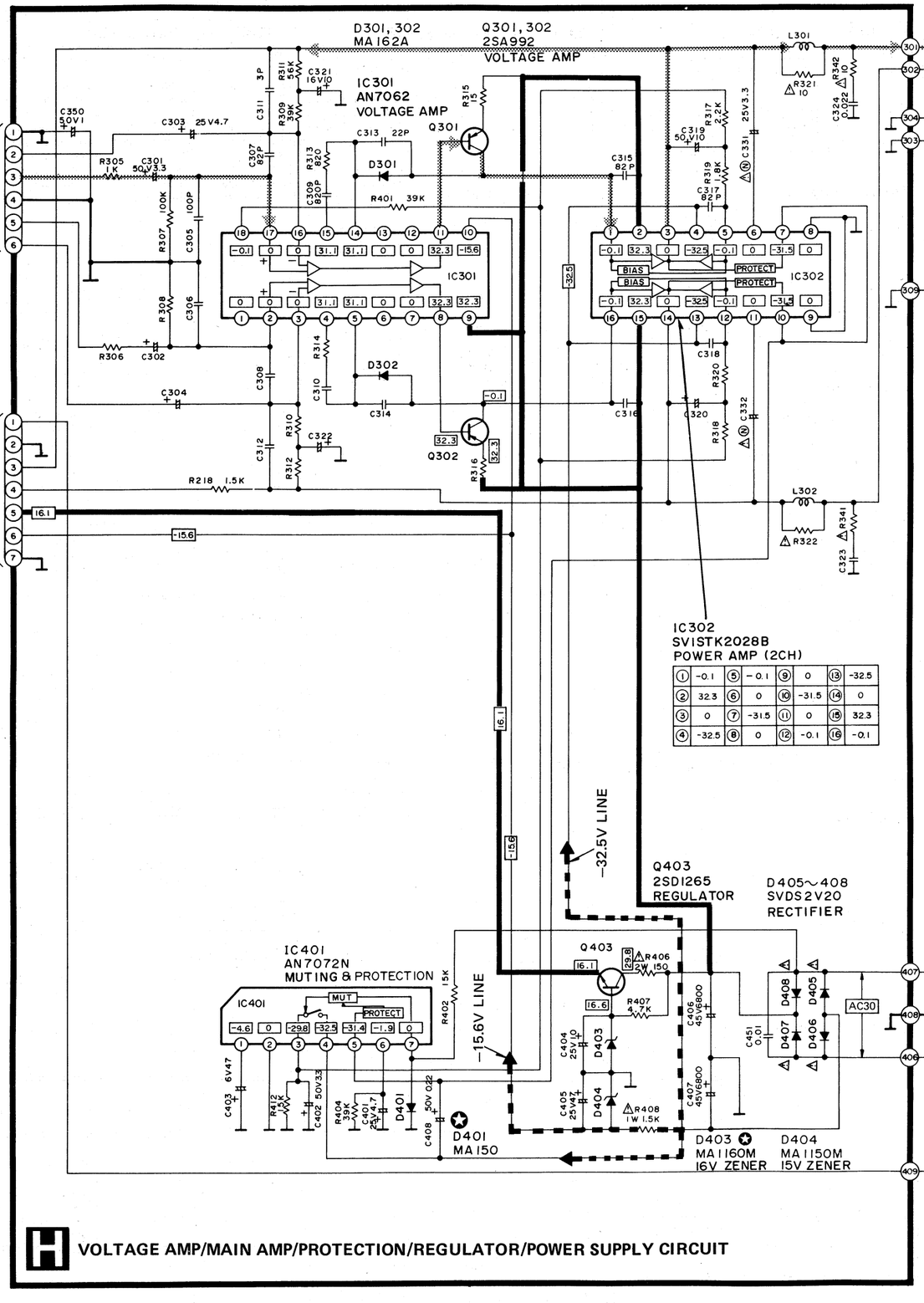

A
Product for [EGA] only
GND
(L ch)
PHONO
(R ch)
PHONO
DIRECT CONNECTOR
B
1. Tuner signal (Rch)
2. Tuner signal (L ch)
3. Ground
4. Input selector (Tuner ↔ Amp.)
5. ---
6. ---
TUNER IN (Rch)
TUNER IN (L ch)
GND
DIRECT OPERATION (TUNER)
J201
EQUALIZER/OPERATION CONTROL CIRCUIT
D
IC101
SVINJ4559DDM
EQUALIZER
Q504~506, 515, 517
UN4111
SWITCHING
Q507, 508, 516, 518
UN4211
D519 SWITCHING
D504~509, 513, 516~519 MA150
D526,527
MA1047M
4.7V ZENER
Q517 TAPE
SOURCE Q515
Q504 AUX
Q505 TUNER
Q506 PHONO
TAPE/SOURCE Q516
Q518 TAPE/SOURCE
TAPE STOP Q508
PHONO Q507
F
INPUT SELECTOR CIRCUIT
J505
S503 (AUX/CD/VIDEO)
S502 (TUNER)
S501 (PHONO)
S504 (TAPE)
S505 (SOURCE)
Q501, 502
UN4111
SWITCHING
Q503
UN4211
SWITCHING
D502, 503, 514
MA150
PHONO Q501
TAPE Q503
CD Q502
1. Amp. → Deck (Synchro rec)
2. Equalizer ↔ Amp.
3. Amp. ↔ Deck
Amp. → Equalizer
4. Deck → Amp.
5. Equalizer → Amp.
6. Amp. → Deck (stop)
Amp. → Equalizer
Product for [EGA] only
(L ch)
TUNER
AUX/CD/VIDEO
REC OUT
TAPE PLAYBACK
(R ch)
TUNER
AUX/CD/VIDEO
REC OUT
TAPE PLAYBACK
E
DIRECT CONNECTOR/SYNCHRO REC TERMINAL
J501
J502
Play signal
Synchro signal
(PHONO)
(CD)
C
DIRECT CONNECTOR
J202
REC OUT (Rch)
REC OUT (L ch)
GND
PLAY BACK (R ch)
GND
PLAY BACK (L ch)
D501
MA27W-A
IC201
SVITC9151P
INPUT SELECTOR
J203
INPUT/OPERATION CONTROL CIRCUIT
J504
J503
J205
Q519
UN4111
SWITCHING
12V 110mA
PLI
POWER IND.
POWER OFF DET
Q520
Q509~512, 520
UN4211
SWITCHING
D521~524
SVDSLV31MC3
INPUT SELECTOR IND.
D510~512, 515, 520
MA150
D525
SVDSLV31YC3M
EQ IND
Q513
2SA1015
MUTING CONTROL
Q201
Q202
Q201, 202
2SK301
MUTING
FUNCTION CIRCUIT
G
BASS
TREBLE
VOLUME
BALANCE
J301
J204
H
VOLTAG

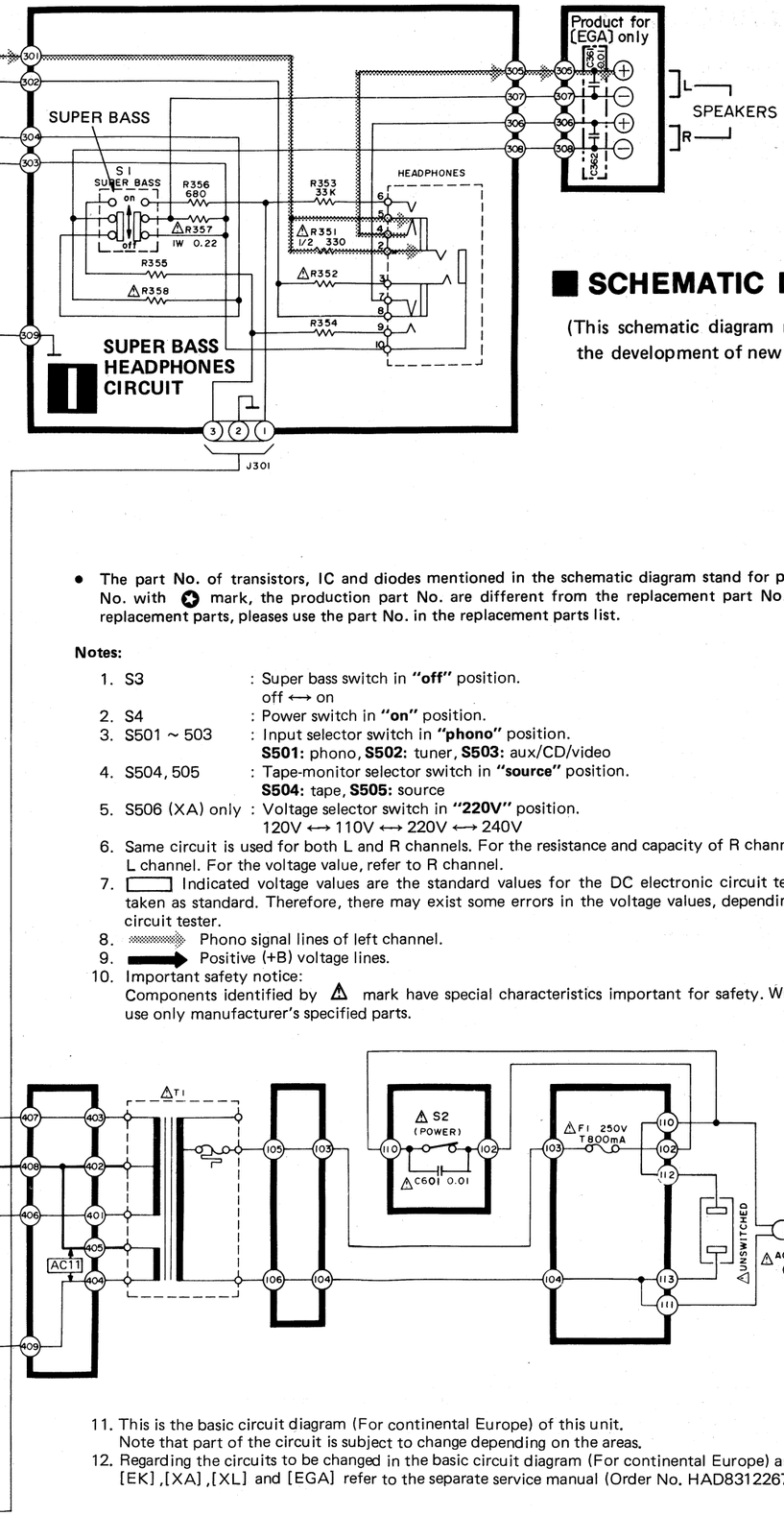
10 11 12 13 14 15 16 17 18

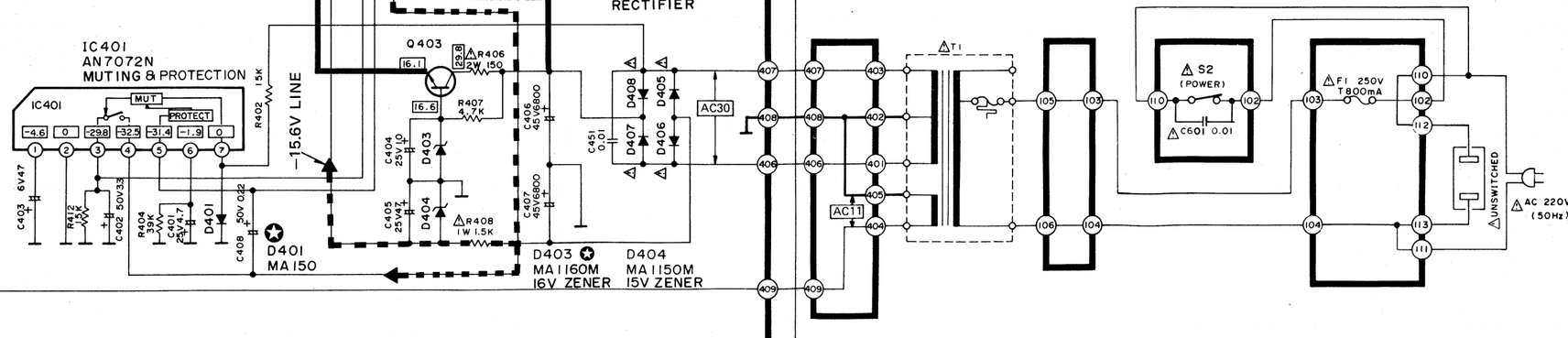












■ SCHEMATIC DIAGRAM

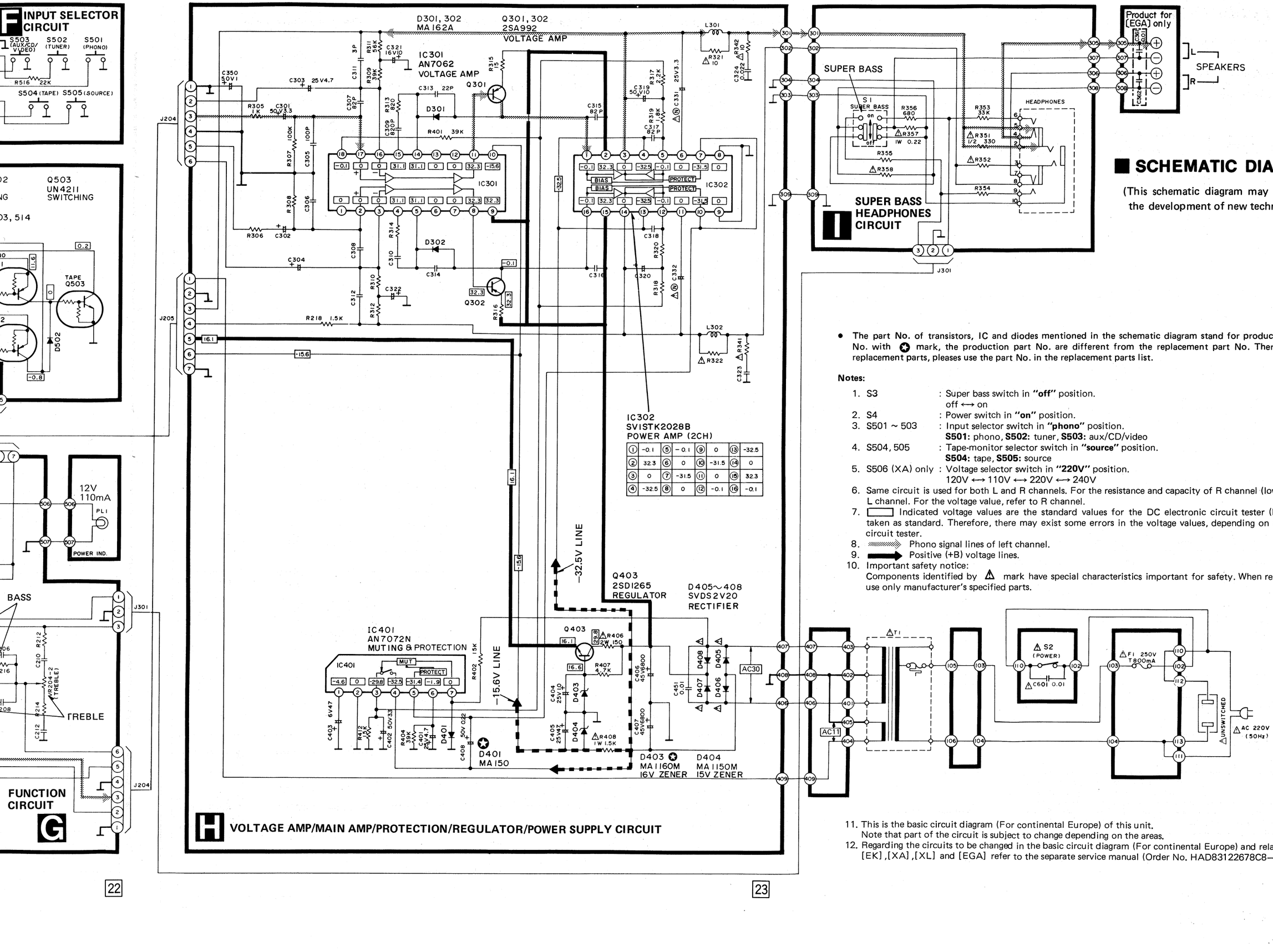
(This schematic diagram may be modified at any time with the development of new technology.)

- The part No. of transistors, IC and diodes mentioned in the schematic diagram stand for production part No. Regarding the Part No. with ✪ mark, the production part No. are different from the replacement part No. Therefore, when placing an order for replacement parts, pleases use the part No. in the replacement parts list.

Notes:

1. S3 : Super bass switch in **"off"** position. off ⟷ on
2. S4 : Power switch in **"on"** position.
3. S501 ~ 503 : Input selector switch in **"phono"** position. **S501:** phono, **S502:** tuner, **S503:** aux/CD/video
4. S504, 505 : Tape-monitor selector switch in **"source"** position. **S504:** tape, **S505:** source
5. S506 (XA) only : Voltage selector switch in **"220V"** position. 120V ⟷ 110V ⟷ 220V ⟷ 240V
6. Same circuit is used for both L and R channels. For the resistance and capacity of R channel (lower of circuit diagram), refer to L channel. For the voltage value, refer to R channel.
7. ▭ Indicated voltage values are the standard values for the DC electronic circuit tester (high impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.
8. ▒▒▒ Phono signal lines of left channel.
9. ▬▶ Positive (+B) voltage lines.
10. Important safety notice: Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
11. This is the basic circuit diagram (For continental Europe) of this unit. Note that part of the circuit is subject to change depending on the areas.
12. Regarding the circuits to be changed in the basic circuit diagram (For continental Europe) and related areas [EK], [XA], [XL] and [EGA] refer to the separate service manual (Order No. HAD83122678C8–A).

9 10 11 12 13 14 15 16 17 18



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12. Regarding the circuits to be changed in the basic circuit diagram (For continental Europe) and related areas [EK], [XA], [XL] and [EGA] refer to the separate service manual (Order No. HAD83122678C8–A).

■ RESISTORS & CAPACITORS

Notes: 1. Part numbers are indicated on most mechanical parts. Please use this part number for parts orders.
2. Important safety notice: Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
3. The "Ⓢ" mark is service standard parts and may differ from production parts.
4. The unit of resistance is Ω(ohm), K = 1000Ω, M = 1000kΩ.
5. The unit of capacitance is μF (microfarad). P = 10^{-6} μF
6. Bracketed indications in Ref. No. columns spedify the area. Parts without these indications can be used for all areas.

Resistor Type	Wattage	Tolerance
ERD : Carbon	25 : 1/4W	J : ±5%
ERG : Metal Oxide	1 : 1W	G : ±2%
ERX : Metal Film	2 : 2W	
	S1 : 1/2W	

Capacitor Type	Voltage		Tolerance
	ECEA Type	Other	
ECEA : Electrolytic	1A : 10V	1H : 50V	C : ±0.25pF
ECCD : Ceramic	1C : 16V	KC : 400V AC	J : ±5%
ECKD : Ceramic	1E : 25V	2H : 500V DC	K : ±10%
ECQM : Polyester	1H : 50V		Z : +80%, −20%
ECET : Electrolytic	50 : 50V		P : +100%, −0%
ECEA..... N: Non Polar Electrolytic	25 : 25V		
ECQE : Polyester	45 : 45V		

●RESISTORS

Ref. No.	Part No.	Value
R101,102 Ⓢ	ERD25FJ391	390
R103,104 Ⓢ	ERD25TJ224	220K
R105,106 Ⓢ	ERD25TJ563	56K
R107,108 Ⓢ	ERD25FJ271	270
R109,110 Ⓢ	ERD25FJ680	68
R111,112 Ⓢ	ERD25TJ184	180K
R113,114 Ⓢ	ERD25TJ123	12K
R115,116 Ⓢ	ERD25TJ563	56K
R117,118 Ⓢ	ERD25FJ102	1K
R119,120 Ⓢ	ERD25FJ101	100
R151, 152 Ⓢ [EGA]only	ERD25FJ391	390
R153, 154 Ⓢ [EGA]only	ERD25FJ272	2.7K
R155, 156 Ⓢ [EGA]only	ERD25FJ222	2.7K
R157, 158 Ⓢ [EGA]only	ERD25FJ222	2.2K
R159, 160 Ⓢ [EGA]only	ERD25FJ222	2.2K
R161 Ⓢ	ERD25FJ100	10

Ref. No.	Part No.	Value
R201,202 Ⓢ	ERD25FJ332	3.3K
R207,208 Ⓢ	ERD25TJ223	22K
R209,210 Ⓢ	ERD25FJ392	3.9K
R211,212 Ⓢ	ERD25FJ472	4.7K
R213,214 Ⓢ	ERD25FJ102	1K
R215,216 Ⓢ	ERD25TJ154	150K
R217 Ⓢ	ERD25FJ152	1.5K
R218 Ⓢ	ERD25FJ152	1.5K
R219,220 Ⓢ⚠	ERD25FJ820	82
R221,222 Ⓢ	ERD25TJ153	15K
R305,306 Ⓢ	ERD25FJ102	1K
R307,308 Ⓢ	ERD25TJ104	100K
R309,310 Ⓢ	ERD25TJ393	39K
R311,312 Ⓢ	ERD25TJ563	56K
R313,314 Ⓢ	ERD25FJ821	820
R315,316 Ⓢ⚠	ERD25FJ150	15

Ref. No.	Part No.	Value
R317,318 Ⓢ	ERD25FJ222	2.2K
R319,320 Ⓢ	ERD25FJ182	1.8K
R321,322 Ⓢ⚠	ERD25FJ100	10
R341,342 Ⓢ⚠	ERD25FJ100	10
R351,352 ⚠	ERDS1FJ331	330
R353,354 Ⓢ	ERD25TJ333	33K
R355,356 Ⓢ	ERD25FJ681	680
R357,358 Ⓢ	ERX1ANJR22	0.22
R401 Ⓢ	ERD25TJ393	39K
R402 Ⓢ	ERD25TJ153	15K
R404 Ⓢ	ERD25TJ393	39K
R406 Ⓢ	ERG2ANJ151	150
R407 Ⓢ	ERD25FJ472	4.7K
R408 Ⓢ	ERG1ANJ152	1.5K
R412 Ⓢ	ERD25TJ153	15K
R501 Ⓢ	ERD25TJ124	120K

Ref. No.	Part No.	Value
R502 Ⓢ	ERD25FJ682	6.8K
R503,504 Ⓢ	ERD25TJ153	15K
R505,506 Ⓢ	ERD25TJ223	22K
R507 Ⓢ	ERD25TJ223	22K
R508 Ⓢ	ERD25FJ473	47K
R509 Ⓢ	ERD25FJ103	10K
R511 Ⓢ	ERD25TJ824	820K
R513,514 Ⓢ	ERD25FJ562	5.6K
R515 Ⓢ	ERD25FJ103	10K
R516 Ⓢ	ERD25TJ223	22K
R517 Ⓢ	ERD25FJ682	6.8K
R518,519 Ⓢ	ERD25FJ561	560
R520,521 Ⓢ	ERD25FJ561	560
R522 ⚠	ERDS1FJ471	470
R531 Ⓢ	ERD25FJ561	560

●CAPACITORS

Ref. No.	Part No.	Value
C101,102 Ⓢ	ECEA50Z3R3	3.3
C103,104 Ⓢ	ECCD1H101K	100P
C105,106 Ⓢ	ECKD1H471KB	470P
C107,108 Ⓢ	ECEA1CS330	33
C109,110	ECQM1H223KV	0.022
C111,112 Ⓢ	ECQM1H682JZ	0.0068
C113,114 Ⓢ	ECEA50Z1	1
C115,116 Ⓢ	ECEA1CS330	33
C117 Ⓢ	ECKD1H103ZF	0.01
C151,152 Ⓢ [EGA]only	ECCD1H180K	18P
C201,202 Ⓢ	ECKD1H331KB	330P
C205,206	ECQM1H183KV	0.018
C207,208	ECQM1H683KV	0.068

Ref. No.	Part No.	Value
C209,210	ECQM1H222KV	0.0022
C211,212	ECQM1H183KV	0.018
C213,214 Ⓢ	ECEA50Z1	1
C215 Ⓢ	ECEA50Z1	1
C301,302 Ⓢ	ECEA50Z3R3	3.3
C303,304 Ⓢ	ECEA25Z4R7	4.7
C305,306 Ⓢ	ECCD1H101K	100P
C307,308 Ⓢ	ECCD1H820K	82P
C309,310 Ⓢ	ECKD1H821KB	820P
C311,312 Ⓢ	ECCD1H030CC	3P
C313,314	ECCD1H220K	22P
C315,316 Ⓢ	ECCD1H820K	82P
C317,318 Ⓢ	ECCD1H820K	82P
C319,320	ECEA1HS100	10

Ref. No.	Part No.	Value
C321,322 Ⓢ	ECEA1HS100	10
C323,324 Ⓢ	ECKD1H223ZF	0.022
C331,332 ⚠	ECEA1EN3R3S	3.3
C350 Ⓢ	ECEA50Z1	1
C361,362 Ⓢ [EGA]only	ECKD1H103ZF	0.01
C401 Ⓢ	ECEA25Z4R7	4.7
C402 Ⓢ	ECEA50Z3R3	3.3
C403 Ⓢ	ECEA1AS470	47
C404 Ⓢ	ECEA1HS100	10
C405 Ⓢ	ECEA1HS470	47
C406,407	ECETS45V682U	6800
C408 Ⓢ	ECEA50ZR22	0.22
C451[XA]only	ECKD2H103PE	0.01

Ref. No.	Part No.	Value
C451[other areas]	ECQE1104KN	0.1
C501 Ⓢ	ECEA1HSR33	0.33
C502 Ⓢ	ECEA1AS102	1000
C503 Ⓢ	ECKD1H103ZF	0.01
C504 Ⓢ	ECEA50ZR47	0.47
C505 Ⓢ	ECEA50Z1	1
C508 Ⓢ	ECEA50Z1	1
C509 Ⓢ	ECKD1H103ZF	0.01
C531 Ⓢ	ECEA1ES470	47
C532 Ⓢ	ECEA50ZR22	0.22
C533 Ⓢ	ECKD1H103ZF	0.01
C601	ECKDKC103PF2	0.01

■ REPLACEMENT PARTS LIST

Notes: 1. Part numbers are indicated on most mechanical parts. Please use this part number for parts order.
2. Important safety notice: Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
3. Ⓚ —marked parts are used for black only, while O —marked parts are for silver type only.
4. Part other than Ⓚ — and O—marked are used for both black and silver type.
5. Bracketed indications in Ref. No. columns specify the area. Parts without these indications can be used for all areas.
6. The "Ⓢ"mark is service standard parts and may differ from production parts.
7. The parenthesized numbers in the column of description stand for the quantity per set.

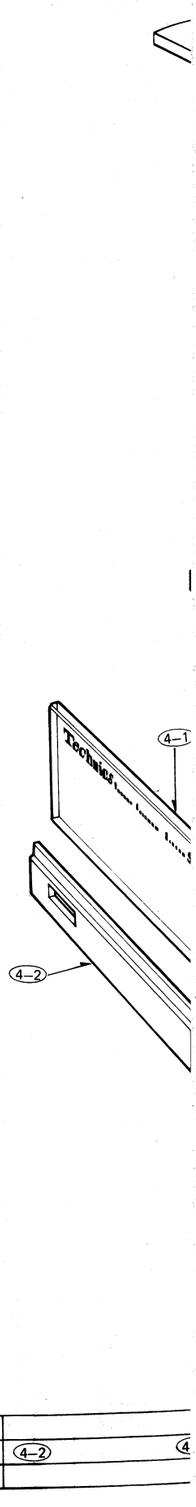
Black type model No. : SU-6(K)

Ref. No.	Part No.	Part Name & Description
INTEGRATED CIRCUITS		
IC101	SVINJ4559DDM	Equalizer
IC101(EGA) only	SVINJM2043DD	Equalizer
IC201	SVITC9151P	Input Selector
IC301	AN7062	Voltage Amp.
IC302	SVISTK2028B	Power Amp.
IC401	AN7072N	Muting & Protection
TRANSISTORS		
Q201,202	2SK301−S	Muting
Q301,302	2SA992	Voltage Amp
Q403	2SD1265−O	Regulator
Q501,502, 504~506,515, 517,519	UN4111	Switching
Q503,507~512, 516,518,520	UN4211	Switching
Q513	2SA1015−Y	Muting Control
DIODES		
D301,302,401, 502~520 Ⓢ	MA162A	Switching
D403	RD16EB	16V, Zener
D404	MA1150M	15V, Zener
D405~408 ⚠	SVDS2V20	Rectifier
D501	MA27W−A	
D521~524	SVDSLV31MC3	L. E. D. (Input Selector)
D525	SVDSLV31YC3M	L. E. D. (Input Selector)
D526,527	MA1047−M	4.7V, Zener
COILS		
L151~154(EGA) only	ELQS181KB	Choke
L301,302	SLQY07G−30	Choke
L601(EGA)only	SLQZ650MH49	Choke
TRANSFORMERS		
T1(other areas) ⚠	SLT5M335−W	Power Source
T1(EK,XL)only ⚠	SLT5M337−W	Power Source
T1(XA)only ⚠	SLT5M339−W	Power Source
VARIABLE RESISTORS		
VR201	EWAQA6X15A15	Volume, 100kΩ(A)
VR202	EWANF5X15G15	Balance, 100kΩ(G)
VR203,204	EWANA6X15C15	Tone Control, 100kΩ(C)
LAMP		
PL1 ⚠	XAMS6Q8C	12V, 110mA
FUSES		
F1 ⚠	XBA2C08TR0	250V, T800mA
F2(EW,XA,EGA) only ⚠	XBA2C16TR0	250V, T1.6A
SWITCHES		
S1	SSH1127	Super Bass
S2 ⚠	SSH1071	Power Source
S501~505	SSG13	Input Selector
S506(XA)only ⚠	ESE37219	Voltage Selector
CABINET and CHASSIS PARTS		
1 ○	SBC629	Button, Input Selector Switch (1)
1 Ⓚ	SBC629−1	Button, Input Selector Switch (1)
2	SBC489	Button, Power Switch (1)
3	SBC439	Button, Super Bass (1)
4 ○	SGWU6−SN	Front Panel, Ass'y (Silver) (1)
4 Ⓚ	SGWU6−KE	Front Panel, Ass'y (Black) (1)
4−1 ○	SGU379	Transparent Plate (Silver Type) (1)
4−1 Ⓚ	SGU379−2	Transparent Plate (Black Type) (1)
4−2 ○	SGX7559−2	Ornament, Super Bass(Silver Type) (1)

Ref. No.	Part No.	Part Name & Description
CABINET and CHASSIS PARTS		
4−2 Ⓚ	SGX7559−3	Ornament, Super Bass(Black Type) (1)
4−3 ○	SGX7561−6	Ornament, Volume (Silver Type) (1)
4−3 Ⓚ	SGX7561−8	Ornament, Volume (Black Type) (1)
4−4	SBD69−1	Knob, Bass Treble, Balance (3)
4−5	SHR9673	Holder, Knob (3)
4−6 ○	SGXU8−SN	Ornament, Volume (Silver Type) (1)
4−6 Ⓚ	SGXU8−KE	Ornament, Volume (Black Type) (1)
4−7	SBD83−1	Knob, Volume Control (1)
4−8	SHR9675−1	Holder, Volume Knob (1)
5	SMP355	Holder, L. E. D. (1)
6	SJJ63F	Jack Headphone (1)
7	SMPU6−SN	Case (1)
8 ○	SGU381−2	Identification Plate (Silver Type) (1)
8 Ⓚ	SGU381−5	Identification Plate (Black Type) (1)
9	SHG435	Rubber (1)
10 ○	SKCU6−SE	Cabinet, Ass'y (Silver) (1)
10(EK)only ○	SKCU6−SK	Cabinet, Ass'y (Silver) (1)
10 Ⓚ	SKCU6−KE	Cabinet, Ass'y (Black) (1)
10(EK)only Ⓚ	SKCU6−KK	Cabinet, Ass'y (Black) (1)
11	SJT347	Holder, Fuse (2)
12(EW,XA,EGA) only	SJT347	Holder, Fuse (4)
13(EK,XL)only	SMX319−3	Insulation Plate (1)
14	SMX823	Insulation Plate (1)
15	SUW2151	Bracket, Fuse P. C. B. (1)
16(EK,XL) except	SMX319−1	Insulation Plate (1)
17(EK,XL) except	SMN1865	Bracket, AC Outlet Socket (1)
18	SJF4437−1	Terminal Board (Speaker) (1)
19(EK)only ⚠	SJS9227	Socket, AC Power (1)
19(EK,XL) ⚠ except	SJS9225	Socket, AC Power (1)
20(EK)only	SHR129	Bushing, AC Cord (1)
20(XL)only	SHR131	Bushing, AC Cord (1)
20 other areas	SHR127	Bushing, AC Cord (1)
21(EK)only Ⓢ⚠	QFC1205M	AC Cord (1)
21(XL)only Ⓢ⚠	QFC1207MA	AC Cord (1)
21 other areas ⚠	SJA138−3	AC Cord (1)
22(EGA)only	SGPU6−SG	Rear Panel Ass'y (1)
22(EK)only	SGPU6−SK	Rear Panel, Ass'y (1)
22(XL)only	SGPU6−SL	Rear Panel, Ass'y (1)
22(XA)only	SGPU6−SX	Rear Panel, Ass'y (1)
22 other areas	SGPU6−SE	Rear Panel, Ass'y (1)
23	SJS9607−1	Connector (1)
24	SHR9631	Holder (1)
25 ○	SHE135	Pin(Silver Type) (1)
25 Ⓚ	SHE135−1	Pin(Black Type) (1)
26	SJF3055N	Terminal Board (1)

Ref. No.	Part No.	Part Name & Description
CABINET and CHASSIS PARTS		
27	SJJ75BK	Jack, Synchro Rec (2)
29	SUW2107	Bracket (1)
30	SJS9605	Connector (2)
31(EX)only	SKUU6−SE	Bottom Board (1)
31(EW)only	SKUU6−SW	Bottom Board (1)
31(XA)only	SKUU6−SX	Bottom Board (1)
31(XL)only	SKUU6−SL	Bottom Board (1)
31(EK)only	SKUU6−SK	Bottom Board (1)
31 other areas	SKUU6−SF	Bottom Board (1)
(31−1	(SHS2481	Foot (4)
32(XL)only	RJT202B	Terminal (1)
SCREWS		
N1 Ⓢ	XTB3+10BFZ	Tapping, ⊕3×10(2)
N2 Ⓢ	XTB3+16BFN	Tapping, ⊕3×16(4)
N3	XTB3+8GFZ	Tapping, ⊕3×8 (3)
N4 ○	SNE2095−2	Tapping(Silver Type) (4)
N4 Ⓚ	SNE2095−3	Tapping(Black Type) (4)
N5	XTB3+8F	Tapping, ⊕3×8 (4)
N6	XTW3+8HFYR	Tapping, ⊕3×8 (1)
N7	XTBS3+8FFYR1	Tapping with Detent, ⊕3×8 (2)
N8 Ⓢ	XTN3+8B	Tapping, ⊕3×8 (3)
N9	XTBS3+8BFZ1	Tapping with Detent, ⊕3×8 (6)
N10(XA)only Ⓢ	XSN3+6BVS	⊕3×6 (2)
N11	XTBS3+8BFYR1	Tapping with Detent, ⊕3×8 (2)
N12 Ⓢ	XTB3+10BFZ	Tapping, ⊕3×10(1)
N13(EK,XL) except	XTBS3+8BFZ1	Tapping with Detent, ⊕3×8 (2)
N14(XL)only Ⓢ	XTN3+8B	Tapping, ⊕3×8 (1)
WASHERS		
N20 Ⓢ	XWG3	Plain, φ3 (3)
N21(XA)only Ⓢ	XWA3B	Spring, φ3 (2)
N22(XL)only Ⓢ	XWC3B	External Toothed Lock, φ3 (4)
NUT		
N25 Ⓢ	XNS12	φ12 (1)
ACCESSORIES		
A1	SJP2257	Cord (1)
A2(EK)only ⚠	SJP5219−1	Plug Adaptor (1)
A3(XA)only ⚠	SJP5213−1	Plug Adaptor (1)
A4(EGA)only ⚠	XBA2C16TRO	Fuse, 250V, T1.6A (3)
A5(XL)only	SQF11985	Instruction Book (1)
A5(XA)only	SQF11983	Instruction Book (1)
A5(Ei)only	SQF11981	Instruction Book (1)
A5(EK)only	SQF11979	Instruction Book (1)
A5(EGA)only	SQF11977	Instruction Book (1)
A5 other areas	SQF11975	Instruction Book (1)
PACKING PARTS		
P1	SPP659	Polyethylene Bag (1)
P2(XL)only	SPS3917−3	Pad, Left Side (1)
P2 other areas	SPS3917−2	Pad, Left Side (1)
P3(XL)only	SPS3919−4	Pad, Right Side (1)
P3 other areas	SPS3919−2	Pad, Right Side (1)
P4(XL)only ○	SPG4723	Carton Box(Silver Type) (1)
P4(EF)only ○	SPG4721	Carton Box(Silver Type) (1)
P4(EK)only ○	SPG4719	Carton Box(Silver Type) (1)
P4 other areas ○	SPG4717	Carton Box(Silver Type) (1)
P4(EK)only Ⓚ	SPG4729	Carton Box(Black Type) (1)
P4 other areas Ⓚ	SPG4727	Carton Box(Black Type) (1)

■ EXPLODE



A	
B	4−2 4
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■ EXPLODED VIEWS

	Part Name & Description
	ARTS
1	Jack, Synchro Rec (2)
2	Bracket (1)
3	Connector (2)
4	Bottom Board (1)
5	Bottom Board (1)
6	Bottom Board (1)
7	Bottom Board (1)
8	Bottom Board (1)
9	Bottom Board (1)
10	Foot (4)
11	Terminal (1)
N1	Tapping, ⊕3×10(2)
N2	Tapping, ⊕3×16(4)
N3	Tapping, ⊕3×8 (3)
N4	Tapping(Silver Type) (4)
N5	Tapping(Black Type) (4)
N6	Tapping, ⊕3×8 (4)
N7	Tapping, ⊕3×8 (1)
N8	Tapping with Detent, ⊕3×8 (2)
N9	Tapping, ⊕3×8 (3)
N10	Tapping with Detent, ⊕3×8 (6)
N11	⊕3×6 (2)
N12	Tapping with Detent, ⊕3×8 (2)
N13	Tapping, ⊕3×10(1)
N14	Tapping with Detent, ⊕3×8 (2)
N20	Tapping, ⊕3×8 (1)
N21	
N22	
N25	Plain, φ3 (3)
12	Spring, φ3 (2)
13	External Toothed Lock, φ3 (4)
14	
15	φ12 (1)
16	
17	
18	
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22	
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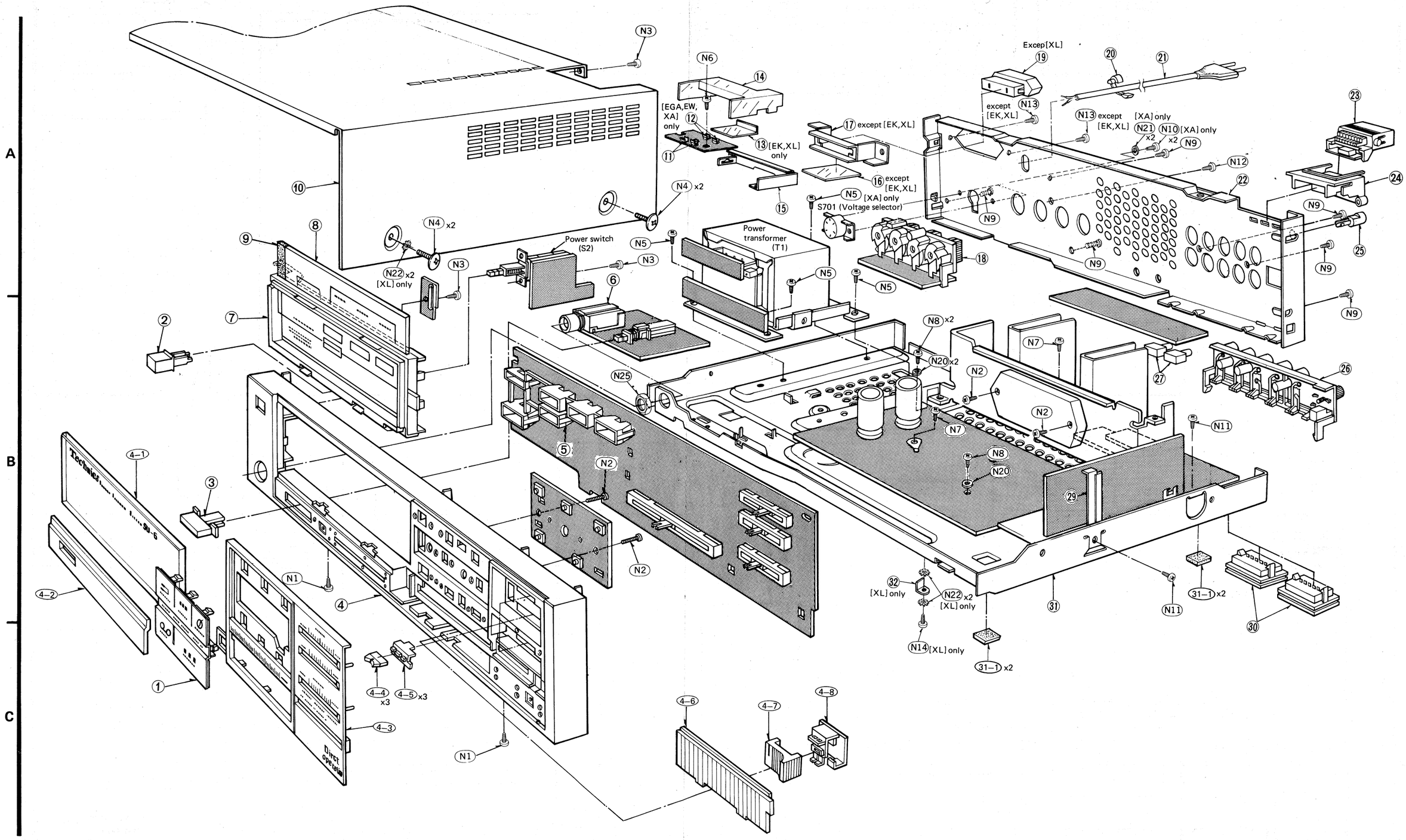
24	
25	
26	
27	
28	
29	
30	
31	
31-1	
32	
1	Cord (1)
2	Plug Adaptor (1)
3	Plug Adaptor (1)
4	Fuse, 250V, T1.6A (3)
4-1	
4-2	
4-3	
4-4	
4-5	
4-6	
4-7	
4-8	
	Instruction Book (1)
	Instruction Book (1)
	Instruction Book (1)
	Instruction Book (1)
	Instruction Book (1)
	Instruction Book (1)
	Polyethylene Bag (1)
	Pad, Left Side (1)
	Pad, Left Side (1)
	Pad, Right Side (1)
	Pad, Right Side (1)
	Carton Box(Silver Type) (1)
	Carton Box(Silver Type) (1)
	Carton Box(Silver Type) (1)
	Carton Box(Silver Type) (1)
	Carton Box(Black Type) (1)
	Carton Box(Black Type) (1)



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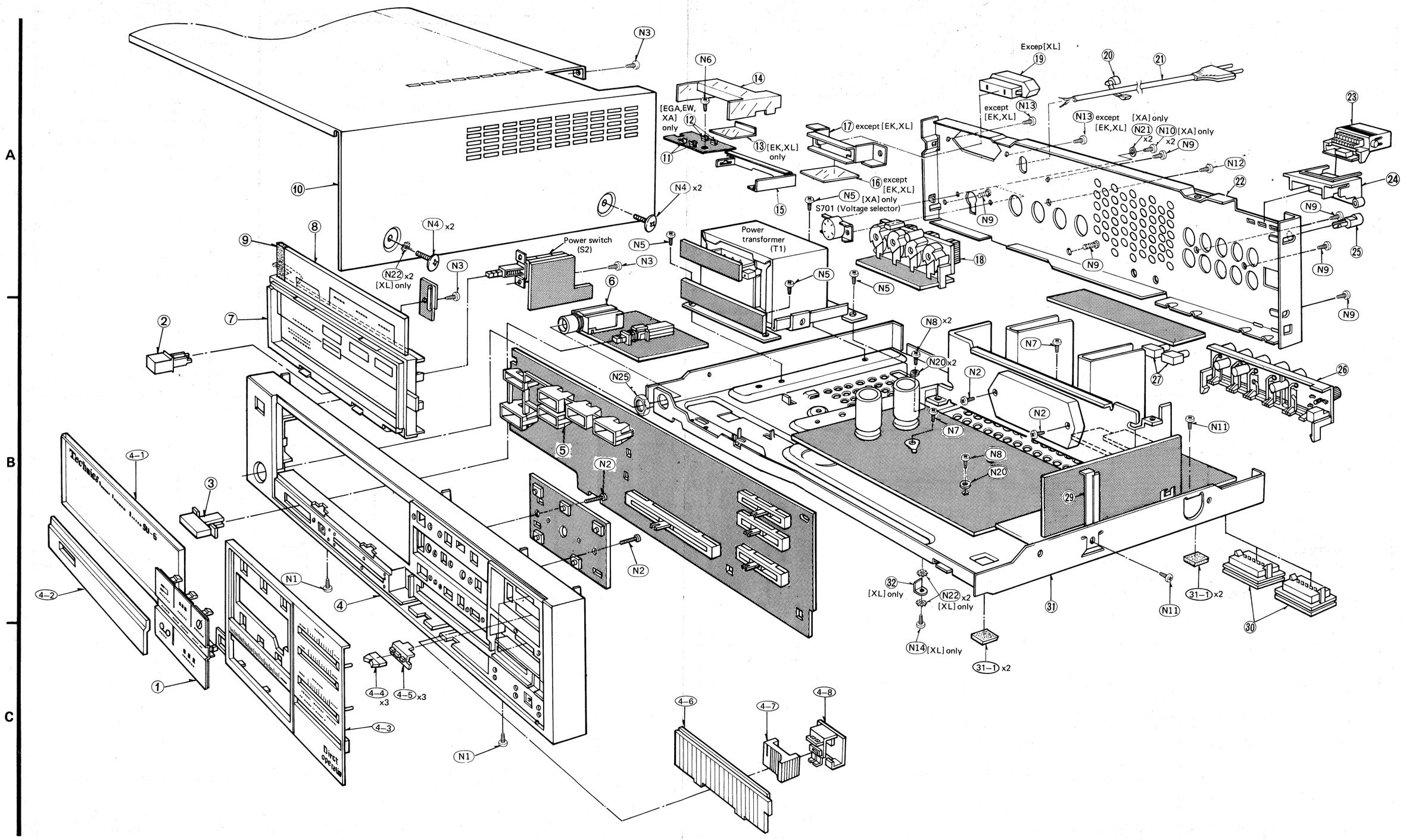
■ EXPLODED VIEWS

Part Name & Description	
ARTS	
Jack, Synchro Rec	(2)
Bracket	(1)
Connector	(2)
Bottom Board	(1)
Bottom Board	(1)
Bottom Board	(1)
Bottom Board	(1)
Bottom Board	(1)
Bottom Board	(1)
Foot	(4)
Terminal	(1)
Tapping, ⊕3×10	(2)
Tapping, ⊕3×16	(4)
Tapping, ⊕3×8	(3)
Tapping (Silver Type)	(4)
Tapping (Black Type)	(4)
Tapping, ⊕3×8	(4)
Tapping, ⊕3×8	(1)
Tapping with Detent, ⊕3×8	(2)
Tapping, ⊕3×8	(3)
Tapping with Detent, ⊕3×8	(6)
⊕3×6	(2)
Tapping with Detent, ⊕3×8	(2)
Tapping, ⊕3×10	(1)
Tapping with Detent, ⊕3×8	(2)
Tapping, ⊕3×8	(1)
Plain, φ3	(3)
Spring, φ3	(2)
External Toothed Lock, φ3	(4)
φ12	(1)
Cord	(1)
Plug Adaptor	(1)
Plug Adaptor	(1)
Fuse, 250V, T1.6A	(3)
Instruction Book	(1)
Instruction Book	(1)
Instruction Book	(1)
Instruction Book	(1)
Instruction Book	(1)
Instruction Book	(1)
Polyethylene Bag	(1)
Pad, Left Side	(1)
Pad, Left Side	(1)
Pad, Right Side	(1)
Pad, Right Side	(1)
Carton Box (Silver Type)	(1)
Carton Box (Silver Type)	(1)
Carton Box (Silver Type)	(1)
Carton Box (Silver Type)	(1)
Carton Box (Black Type)	(1)
Carton Box (Black Type)	(1)



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